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FISHER'S

NATIONAL MAGAZINE

AND

INDUSTRIAL RECORD.

Self-dependence and Self-improvement—
The first right, and the first duty of every nation.
JOHN QUINCY ADAMS.

VOL. I.

FOR ALPHABETICAL INDEX, SEE END OF VOL. 2d.

NEW-YORK:
EDITED AND PUBLISHED BY REDWOOD FISHER,
No. 161 FULTON-STREET.
1846.

THE

NATIONAL MAGAZINE

AND

Industrial Record.

Vol. I. NEW YORK, JUNE, 1845. No. I.

INTRODUCTION.

It is now fifty-six years since the adoption of the Constitution, and yet, strange to tell, little has been done by authority under it, to present in an authenticated form a satisfactory account of our population, and the employments in which it is occupied.

No adequate attempt has been made until the last Census of 1840, to inquire into the general industry, so as to give an idea of what progress was making in the all-important branches of Agriculture, Manufactures, Commerce, and the Arts. And now that we have before us the sixth Census, taken under the Act of Congress, great doubts are entertained of its accuracy in many very interesting particulars. So far as regards the population of the Union, it is no doubt sufficiently correct; at all events, as it is the only medium through which we can ever arrive at any result upon that point, we must be content to use it, and draw upon it for such knowledge as it contains of our progress and actual condition.

Numbers, although sufficiently important in many respects, are far from possessing so great an interest as would be derived from a correct knowledge of the manner in which our people are employed; and it is in the hope that we may be enabled in due time, through private means, to attain this desirable object, that this work is undertaken.

For if there be any one publication more vitally interesting to the American people than another, it is surely one conveying a knowledge of our actual progress in the scale of nations; and it is precisely that information which it is the object of this work to impart—for it is now nowhere imbodied and placed on record. It is proposed to present a picture such as has

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never been seen—a *camera obscura* of the busy, bustling, intelligent mass of our citizens at their daily employment—of those who till the soil, who weave the woof, and who poise the hammer; of the artists who fashion all things to their appropriate uses, and supply countless millions at home and abroad with the necessities, the comforts, and the luxuries of life.

We shall prove that Agriculture, Manufactures, and Commerce, far from being rivals, are the three graces of civil society, and like the immortal sisters, should ever be presented, with their hands joined, smiling and rejoicing, while adorning the social system—each sustaining the other in a united and harmonious action, which is decreed to their joint labours by an incontrovertible law of their very nature.

We are firm believers in the eternal truths upon which our institutions are reared, and it is because we thus believe, that we would show forth in all their majesty their great results.

Great, however, as are these results of the free and untrammelled mind of man working out his destiny, they are yet but in their infancy, and much as they secure to us the blessings of civilization, they are far from having reached perfection. Much, indeed, has been accomplished in our short career, but much yet remains to be done: for on the great subject of the Home Industry there is a want of accurate knowledge pervading the community upon many of its most vital interests, touching our Agriculture, Manufactures, and Commerce.

In disseminating information on these important topics, it is not our purpose to trouble the reader with theories; of these we have assuredly had enough. The great question which is now mooted, is not what can be *said* for our institutions, but how do they work? It is proposed to imbody the facts, and submit them to the candid judgment of the world.

There is a beauty in the working of our system which we shall endeavour to show to our readers, not only in the great results of the joint industry of the Agriculturist, the Manufacturer, and the Merchant, but as it developes itself in every relation of society. We shall select from abroad all important discoveries in Science and the Arts, and institute such comparisons as shall tend to illustrate the general progress of the age.

We believe there is an abundant field to labour in, and are aware that it will prove an arduous duty, but we do not doubt, in due season, with the aid of the distinguished citizens who have profferred their assistance, to gather up the facts and imbody them, in such a manner as shall render them alike instructive and entertaining.

From our great extent of territory and variety of climate, our interests are various and diffuse—which has given rise to the unfounded opinion that they are in some respects adverse, and that therefore, some sections of the country receive injury from the public measures and policy, which are imperiously demanded, to insure to us the most important attributes of sovereignty. Among these measures, the protection of our labour, by means of a discriminating tariff may be considered as the most prominent.

We do not deem it necessary in conducting this work, to go into elaborate arguments to sustain the necessity of such discrimination. We believe the advancement we have made in Manufactures and the Arts generally, if fully made known, will for ever put that much mooted question at rest. We shall, therefore, rely upon the facts which with all diligence will be collected to sustain us in the opinion already expressed, that our agricultural and planting interests harmonize with those of the

Manufacturer, the Miner, and the Merchant,—and that the due protection of the labour of the country is as important to the one as to the other.

Our system, as it at present exists, speaks for itself in the full occupation it gives to every trade and business in which our population is engaged. Capital finds ready and abundant sources for investment, industry of all kinds is well rewarded, and we may safely challenge history past or present to exhibit a nation or people, possessing so much prosperity and happiness, and these so generally diffused throughout society, as is now the case in this highly favoured land.

Our readers will of course appreciate the nature of this work, and will perceive that we shall require time, to collect and imbody a good and accurate account of the industrial kaleidescope which daily presents itself in the immense variety of our home pursuits.

We have grown, and are daily growing out of our own knowledge. The rapid improvement which has taken place within a very few years in almost every art and science, is constantly increasing human power over time and space, and varying the modifications and uses of all material substances to such an extent, that no just estimate can be formed of the rapid advancement in our progress, but through the medium of a periodical specifically designed to record it.

Wholesome legislation requires such a record. Individuals will be greatly benefited by it. It will have a tendency to improve the public taste, and direct it towards the useful in literature—and our credit abroad will be benefited by an accurate account of our great internal resources.

On the subject of the foreign debt due by some of the States, there is, it is true, a dark spot on our escutcheon, which it is high time was removed.

It is useless to attempt a concealment of the fact that an imprudence has been committed by some of our State Legislatures in contracting debts beyond their present abilty to sustain, by a punctual payment of the interest. It is, therefore, rendered obvious that some mode must be fallen upon to wipe out this great stain upon our moral character. What that mode is to be, we pretend not to say, but that it must be done, and that speedily, is beyond all question, or the consequences of our delinquency in this respect, will be severely visited upon us. Our integrity is doubted, can we consent that it should remain so?

On the important subject of pauperism and crime, it is believed a careful examination will show, that a large portion of both is imported, and that even burthened as we are by their almost daily importation from abroad, the amount of both is much less here than in any other country.

An inquiry into the present state of our public school system, and a comparison of it with those of other countries cannot fail to be eminently useful. It is said that Prussia and other parts of Germany are in advance of us in this great work, so peculiarly essential to the prosperity and happiness of a republic. We shall endeavour to ascertain how far this is true, and state the facts as they exist, that we may profit by them, if they shall show a better or more extended system than our own.

We shall with unremitting industry and the continued exercise of our best endeavours collect and report our researches on all these various subjects, as fast as we shall receive them.

To aid us in these endeavours we invite all those who may see this number of our work to communicate to us, such facts as may come to their knowledge, as will in any way aid us in the objects we have in view as herein set forth; and we shall feel much obliged by a call at our office, entrance third door below Broadway, in Fulton-street, opposite St. Paul's Church, from such as may feel an interest in so doing; that we may receive and impart information on any subject connected with the industrial pursuits of the Union—promising on our part a full and free communication and interchange of such knowledge as may be in our power to give, and which may prove interesting to the visitor.

Having premised thus much of our intentions, we put forth our bark upon the great ocean of time, well knowing that it will have many cross currents and adverse winds to encounter—but having served a long apprenticeship in the course we have to steer, and trusting for safe guidance to the policy we advocate, as our polar star, we unfurl our sails to the breeze with the same feelings of ultimate success which inspired the mind of that great philosopher and navigator, who boldly dared the dangers of the mighty deep to reveal to the millions of the eastern hemisphere a new world—then the home of the wandering savage, but destined one day to be the abode of Christian nations, imbued with a knowledge of the many blessings of the social state. It is indeed to show forth these blessings and exhibit a picture, which even the great and far seeing mind of Columbus could never have conceived, that our columns will be devoted—and like him we feel that we have an unknown world replete with the richest treasures to discover and explore.

New York, June 1st, 1845.

ON THE CURRENCY OF THE UNITED STATES.

A STABLE currency is an essential element in the prosperity of a country. As a medium of exchange it becomes the representative of all property, and is, therefore, called not only the representative, but the measure as well as the standard of value. When defining the terms "money" and "currency," it is sometimes contended that money can only consist of coined gold and silver, and is not currency; while currency is said to to be a contract to pay money; that not being the product of labor it has no intrinsic value, being merely a representative of value—and both money and currency are alike deemed articles of commerce. These, however, can hardly be called definitions, nor, indeed, are they strictly correct as such. Some nations have nothing but gold and silver as a general medium of exchange. Do not the precious metals then constitute their currency? Bank notes can hardly be called an article of commerce, but gold and silver coin will pay a debt or purchase commodities in any civilized country. Again, it is quite true that bank notes are only a representative of value. Still, a value has been given for them, and value can again be obtained for them, and if they will purchase as much of any commodity as the amount of specie they represent would purchase, they answer the end for which they were designed, and constitute a currency, which in the ordinary acceptation of the term is called money.

The United States have always had a paper currency, issued by banks chartered by the National or State Governments. An ordinance of Congress, during the war of the Revolution, established the Bank of North America in 1781, and after the adoption of the Constitution, the first United States Bank was chartered in February, 1791, and expired in 1811. The second, chartered in 1816, ceased to be the fiscal agent of Government in 1833, and its charter expired in 1836.

Gold and silver alone, however, are a legal tender, and accordingly so far as laws can accomplish the object, our paper currency has always been redeemable in specie. There have been nevertheless, three periods of suspension of specie payments by our banks: two partial and one general. During the last war, the banks throughout the Union, excepting in New England, suspended their payments. During the commercial and financial crisis of 1837 the suspension was general, but the banks in New York resumed payment in 1838; and in 1839, when the large State Bank of Pennsylvania, which had assumed the name of United States Bank, failed for the second time, and the banks South and West accompanied its fall, the banks in New York did *not* follow its example. All these departures from the specie standard of value, took place when *no* United States Bank was in operation. During nearly forty years of our existence as a nation we had a National Bank acting as the fiscal agent of Government, exercising a controlling influence over the general currency of the country, and maintaining, at all times, the specie standard of value. The friends of such an institution, have now no hope of its restoration, its opponents entertain no fear of its finding successful advocates, at the same time it is well to bear in mind that both the great political parties of the country have been at times alike the advocates and opponents of a National Bank. The first bank was passed during the administration of Washington, and was opposed by Mr. Jefferson, and the party of which he was the head. But when in power, himself, Mr. Jefferson quietly acquiesced in the opinion that the institution was convenient and useful, and by approving certain laws establishing branches, &c., he even seemed to think that a bank might not be unconstitutional. Still his party refused to renew the charter in 1811. But in 1816 the same party, under Mr. Madison's administration, brought forward and carried the bill establishing the second National Bank, against the opposition of the party that had created the first establishment. We thus find that the political founders of the first bank opposed the establishment of the second, while the opponents of the first became the creators of the last. The late bank was indebted for its fall, more to its friends than its foes. It is not impossible that the next institution may owe its existence to those who at present claim to be its enemies, or at least its opponents; opinions may alter, and policy or necessity may produce the change. We have now been ten years without a National Bank or a national currency.

The first experiment intended to furnish the better currency, was the State Bank system, when the various institutions of the respective States became the creators and conservatives of the general currency. During its rapid course the greatest portion of the stock of those States that are now unable to pay their interest, was created, and prices of all commodities, and of every thing that represented value, partook of the spirit of the wide-spread inflation.

The better currency, as it was promised to be, was admitted by its authors to have proved a disastrous failure, long after the people, who had suffered from its operation, had come to the same conclusion. An attempt at a still better currency, therefore, became necessary; and as one extreme is sure to beget another, the specie Sub-Treasury system became the next experiment. The idea, however, of making specie alone the currency of the Union, was found to be somewhat too Spartan, to find favour with the country, and accordingly the plan was never carried out in the spirit in which it was conceived, for checks, and certificates of deposite, and bank notes, continued to be employed in its operation, until, having been condemned by the people in 1840, the Act was repealed in 1841. The next and last experiment proposed, was the Exchequer of Mr. Tyler's Cabinet; but the leading feature of Executive control, which gave it the character of a Government Bank of the worst description, destroyed its chance of success with Congress, and the Exchequer hardly found friends enough to usher it into notice. Since the crisis of 1837, more than three hundred millions of State, Bank, and other stocks, have been stricken out of existence; and now, under altered circumstances, indeed, but with lessened capital, diminished resources, with but the shadow of our former credit abroad, and a want of confidence at home, we are, as we were, when the national deposites were intrusted in 1833 to the State Banks, without a system of currency. In almost every State of the Union the banking capital has been seriously impaired; very few, if any, of our Western or South-Western States can be said to have any currency at all. New England being essentially a manufacturing people, has escaped with less loss, and maintained the standard of her currency with less difficulty than any other portion of the Union. New York, however, maintained the integrity of her position, during the trying period of 1839, with equal credit and success, and has since well preserved the character of her currency. The want of a sound and uniform and sufficient currency for the whole country, was never greater than at present; but every State is left to its own resources to accomplish, in the best way it can, what we have always been led to consider an object of national concern.

A few of the States have become enamoured of the free banking plan, as it is termed, of our State, requiring bank issues to be based on special security. The security was allowed at first to consist of real estate and all State stocks. It is now confined to stock of our own State, and of the United States. The plan, however, is but another expedient, that may have a conservative tendency for a time, but it is likely to prove fruitful of error hereafter, for like all expedients of this nature, it is certain to change with circumstances.

During a period of restriction and want of confidence, as at present, the system tends to contract the available means of the banks, by withdrawing so much of their capital. In times of confident speculation and advancing prices, a temptation would be held out to the States to create stocks on which their own banks could issue notes, and they might thus supply the necessities of the States and uphold the general spirit of speculation.

Without concert of action, or unity of design, without power to create an union of strength, or the means of forming any efficient co-operation, strong in one section of the Union, and weak in the other, as unable to afford relief, as unwilling to share responsibility, without the power to regulate the inland, or to control the foreign exchanges of the country,—

the various local institutions of the different States now constitute the only source of power, not only to furnish a circulating medium and a representative of value, but to resuscitate and preserve the currency and credit system of our extended republic. We cannot so far forget the maxims of prudence or the lessons of experience, as to suppose that a stable currency can be formed out of such materials as these, nor can we consent to surrender our previous convictions and subscribe to that change of opinion, in reference to the system, hitherto so successful, as to admit the necessity of the "odour of nationality" to-day, and describe it as an "obsolete idea" to-morrow. We believe, on the contrary, with Mr. Madison, who in 1816, in his message to Congress, said:—"But for the interests of the community at large, as well as for the purposes of the Treasury, it is essential that the nation should possess a currency of equal value, credit, and use, wherever it may circulate. The Constitution has intrusted Congress exclusively with the power of creating and regulating a currency of that description."

In the absence however of any effort or any intention to change the present system, our attention should be directed to such measures as are likely to accomplish the important objects of affording aid to our credit system, and maintaining the value of our currency.

The system of protection to domestic industry against the efforts of foreign rivalry, whereby to prevent excessive importations, and avoid to any injurious extent, an export of specie, arising from an unfavourable state of trade, is among the most effectual means to maintain the stability of the currency. And on the other hand, an efficient aid from the General Government, in support of State credit, would not only completely restore our national credit, but immediately add a large amount of active and convertible capital to the productive means of the country.

The establishment of manufactures in a country possessing the natural advantages essential to success, tends directly to stimulate industry of the most useful as well as most productive kind. Science is encouraged to lend its aid to the arts; improvements in machinery tends to abridge labour, and reduce the cost of production. The inventive genius of the country becomes stimulated and rewarded, and we thus facilitate the progress and accelerate the accumulation of wealth. Trade being an exchange of commodities, or as it is usually termed, of equivalents, it is plain that the nation whose labour is so directed as to produce the greatest value, exchanges with others to the greatest advantage, and accordingly the country which gives its raw materials in exchange for manufactures, labours to a disadvantage; the power of machinery and the complicated works of art being arrayed against the labour of man and the simple operations of nature. The encouragement of manufactures in the United States, by means of protective duties, renders us independent of foreign nations for those supplies required for the consumption of the great bulk of the people, and in this way aided by the facilities of international communication, each one supplies the other on the cheapest terms, with the various products of their respective industry and skill.

As a general rule, applied to products of general consumption, home competition, when stimulated and encouraged by protection, is certain, in its turn, to protect the consumer against permanent high prices. The agriculturist therefore purchases his goods at little or no greater cost than if they had been made by the poorly fed and cheaply paid labour of Europe;

while he sells his surplus produce higher in consequence of the home demand, which but for the employment of manufacturing industry, would not have existed, at the same time he finds a steady and a certain market.

Our grain finds no sale in Europe. Occasional scarcity furnishing only an incidental demand, and should England open her ports to-morrow to the admission of bread stuffs, at a moderate duty, the Baltic and Black seas could supply her wants cheaper than we could. It is plain, therefore, that if the agriculturist finds no purchasers abroad he must depend upon the home market for the sale of his produce, and it is equally evident that he can only find purchasers among those who are consumers and not producers, and they can find the means of purchasing what he raises only as manufacturers; and accordingly it follows, that were it not for the home market the agriculturist would be unable to obtain his required supplies of manufactured articles.

The planter of cotton, however, insists that he is injured by a protective tariff. For as Great Britain requires his cotton, he could obtain directly, in return, her cheap manufactures, were it not for the protection afforded to home industry.

But he forgets that our tariff secures for him another purchaser, while it opens another and a nearer market for his cotton, that increased means beget increased consumption, while competition ensures a moderate price for the supplies he requires of the manufactured article. If no cotton was manufactured in the United States, there would be an increased supply sent to Great Britain, equal to between one third and one fourth of her consumption of American cotton. This additional supply would necessarily reduce the price, while an increased demand from our increasing population, would have no tendency to reduce the price of her manufactures in a market of which she would then have entire control. If we estimate the present value of cotton consumed in the United States at twelve millions of dollars, the manufactured product is between three and four times that sum. Here then are between two and three additional values beyond the cost of the cotton, retained at home as wages of labour, and interest or profits on capital. And in order to advance the interests of the industry thus rewarded, and of the capital thus employed, railroads and canals are constructed with a view to extend the markets for the manufactured products, and reduce the cost of transportation on the bulky articles of agricultural products, as well as of the raw material required by the manufacturers. By these means the interest of all classes is promoted, and capital, seeking employment, becomes distributed through all the varied channels of circulation. It is not easy, therefore, to perceive how the cotton planter would be benefited by having Great Britain as the purchaser of the cotton now consumed in the United States, and the sole source of supply for the cotton goods he might require, for not only would all the advantage be on her side, but he himself would be a serious loser, for by encouraging and rewarding home industry, all parts of the Union, whether furnishing producers of cotton or of grain, or manufacturers, and therefore consumers of each, are equally and mutually benefited. The planter has an additional market, and an increased number of consumers; the agriculturist is certain of a sale for his produce. Commerce profits by the increased and accumulating means of the country, augmenting both the imports and the exports, and becomes possessed of new and varied products, with which to prosecute her voyages to distant parts of the world. The capitalist becomes confident in his investment, and industry feels sure of its reward; excessive importations are prevented—the duties remain as a security on our hands, and are not exported in specie, as part of the cost of the imported article, an unfavorable balance of trade is thus avoided, and the means of the people are increased, instead of the country becoming impoverished. But a tariff of incidental or accidental protection, which looks to revenue, and nothing else, which may be high to-day and low to-morrow, as chance or necessity may determine; which is fixed and steady, neither in principle nor practice; which is governed by no maxims of public policy, and designed to promote no end or object connected with the public good, would be certain to depress the industry, destroy the confidence, and blight the prosperity of the country.

We allude not to the present tariff as a model of perfection. It seems to have been matured and prepared without sufficient reflection or the requisite information; many articles are charged unnecessarily high. Railroad iron, cheap as it was in England, when the tariff was imposed, might have been admitted at a moderate duty for a limited period. A warehousing bill should have been engrafted upon the tariff policy, as a system required by the operation of a protective tariff, and essential to the interests of commerce. But the principle of protection is what we contend for—it is identified with all interests, and with the prosperity of the whole country, and is absolutely required to maintain the stability of the currency.

The necessity of restoring the credit of the non-paying States of the Union, on the ground of private interest and public policy, of individual character and national fame, is among the most urgent and pressing of our wants.

One hundred and twenty millions of State stock, that appears abroad nearly in the light of the public debt of the United States, is either greatly depreciated or almost without value in the money markets of Europe.

When any stock of our paying States now becomes due, it is remitted and not re-invested, while such of them as are saleable here gradually find their way to this market for "sale and returns."

There was a time when confidence in our State stocks abounded; for when apprehension was entertained for the financial and political state of Europe, the stocks of this country were looked to as a security beyond the reach of accident or disaster. It was then said, there I can invest, and rest secure. There have I placed a portion of my fortune. There have I secured a part of the property of my wife and children, and there, when I shall have left them, they can look with confidence for principal and interest.

These were once the consoling reflections of many of the capitalists and annuitants of England and the Continent. Such was once the proud and enviable opinion entertained of us and of our country. But during 1836 and part of 1837, that period of inflation, the States issued their stocks to create banks, and construct canals and rail roads, the interest on which, since the destruction of bank capital and the suspension of the public works, they are unable to pay; and the principal of which, however honest may be their intentions, however sincere their efforts, we fear they will never be able to discharge in full; for after the long delay that has occcurred, the unaided resources of those States, with the continual increase of debt, caused by the accumulation of arrears of interest, will hardly be sufficient to discharge their heavy indebtedness.

Are the States then without resources? Is there no common fund from which they could obtain relief? Has the General Government no power or right to apply that fund, or anticipate, by its own credit, the necessary means to pay the interest and secure the principal? It is quite true that the public lands present an available resource, constituting for the future an inexhaustible revenue. It is also true that we have a Federal Government, required by the Constitution to provide for the general welfare. But it is deemed improper to pledge the public lands, although they belong to the States; it is deemed unconstitutional to aid the States, because the Constitution has nowhere, in express terms, authorized the Federal Government to do so.

It is true that just after the adoption of that instrument, the debts of the States were assumed by the General Government. As these debts, however, were incurred for the common defence, during the war of the Revolution, the claim of the States may have been stronger; but the right on the part of the Government under the Constitution is still the same. Then, however, the debts were actually assumed and paid—now the Government is only asked to retain, in its own hands, the security belonging to the States, to exchange its own obligation for that of the States, and pay itself, should the States still prove unable or unwilling to comply with their engagements. If an act were passed authorizing the issue of 3 per cent. stock of the United States, by commissioners appointed for the purpose, in exchange for the stock of any State that should appoint commissioners to receive the proceeds of their public works, and of a moderate, but certain tax, to be appropriated to the payment of the interest of the debts, pledging also to the General Government, their quota of the sales of the public lands, National and State Legislation would unite for the public good. The national credit would be granted until the resources of the States should render it unnecessary. The public creditor would be satisfied, the faith of the States would be redeemed, and the credit of the Union restored.

The plan is simple, the means would be effectual, and the result would prove an incalculable blessing, while the existence of the national debt thus created, would be known and felt only by the benefits it conferred. Yet no politician is bold enough to bring forward the measure, no senator moves in its favour, no party espouses the cause of the country.

A public writer in France has said:—"America could easily replenish the public coffers and pay her debts, by submitting to moderate taxation. There are not in her public councils men of sufficient moral courage and patriotic spirit to brave the unpopularity of the true measures, and teach the Democracy its true interests. Therefore is the United States in a condition unworthy a free people."

Yet there are statesmen among us who contend that we require no other system of currency, than the one we now possess; that a protective policy is unnecessary; that the indebted States require no aid from the General Government, and if they did, that it would be unconstitutional to grant it. In the meantime, it is to be feared that the debts of Texas, with its uncounted and uncertain millions, will be paid out of the public treasury or recognized as a public debt, before that of Illinois or Maryland, part and parcel of ourselves, shall be provided for or cared for, although they have the means, by a pledge of their portion of the public domain, to provide ample security for the final payment of their debts.

The sentiment of love towards our country, and of pride in her institutions, has its origin in the best feelings of our nature. But it requires to be strengthened by experience, and sanctioned by our understanding. Our early affections, sustained by the consciousness of the diffusion of the benefits and advantages conferred by equal laws and liberal institutions, strike their roots broad and deep, as we become convinced that all feel the influence and share in the blessings of a well administered Government. An enlightened constituency, whose dearest rights and interests are at stake, are entitled to expect not only good intentions, but a reasonable share of intelligence also, on the part of their representatives in the national councils. But where is our hope, when we find that the prostration of State credit is treated with indifference? That no effort is made to redeem our character, while our name is becoming a by-word and reproach among the nations of the earth? Is there no fear that at last, as a people's confidence is shaken, their attachment may become weakened, when they find that no measure is proposed, none likely to be adopted, to retrieve the sinking honour of the States? Must we become still more and more convinced, by sad and dear-bought experience, that this cruel neglect, this wilful indifference, has not only prostrated the credit of the nation, and injured the character of the people, but that it must tend inevitably to tarnish the fame, and undermine the foundations upon which are to rest the future happiness and prosperity of our country.

INTERNAL IMPROVEMENTS.

The subject of Internal Improvement commends itself to the favour of an intelligent people, from its various and important bearings on their industrial pursuits, their convenience, social intercourse, and general prosperity. The influence which the construction of canals and rail roads has had on the public welfare, is shown by a comparison of the advancement in population and wealth of those sections of the country where a successful system of internal improvements has been adopted and carried out, with those sections where it has been neglected or suspended.

Previous to the last war between Great Britain and the United States, but little had been done in this country in Internal Improvements; the Middlesex Canal, in Massachusetts, 27 miles in length, which was completed in 1808, the Santee Canal, 22 miles, in South Carolina, and a few improvements in the navigation of rivers in several States, being the only works of note in the Union. The immense expenditures by government during the war, for the transportation of cannon, military and naval stores, and the delays and losses consequent upon the want of any means of conveyance for troops, provisions, and other necessary accompaniments of an army, except by imperfect roads, are subjects familiar to the recollections of of many, even at this time.

On the return of peace the minds of many American statesmen were turned to the immense importance of commencing a system of Internal Improvements, but a difference of opinion prevailed whether it should be undertaken by the National Government, or left to the enterprise of the individual States. Although a majority in Congress was occasionally found in favour of the constitutionality and expediency of Internal Improvements by the nation, so many leading men entertained constitutional doubts on the subject, that but little was done by our National Government, except the construction of the Cumberland road, from Cumberland, in Maryland, to Wheeling, on the Ohio river, a distance of about 150 miles, and the improvement of sundry harbours and rivers. The improvement of harbours and navigable rivers within the influence of the tides of the Atlantic Ocean, being beneficial to commerce, was considered perfectly constitutional, while to extend the facilities of communication into the interior by means of canals, and thus benefit the great agricultural interests of the country was, in the minds of many statesmen, a dangerous infringement of the Constitution.

The first great example of the construction of canals by the enterprise and resources of an individual State, was set by the State of New York, under the influence of Dewitt Clinton, Gouverneur Morris, and their associates. The Erie and Champlain canals were commenced in 1817, and opened for navigation from the Hudson River to Lakes Erie and Champlain, in 1825—the State having thus completed 430 miles of canal navigation, at an expense of about nine millions of dollars, in the short period of eight years. The receipts for tolls on these public works, after paying the cost of their maintenance, were sufficient to return the amount of the original cost to the treasury of the State within the term of fifteen years after their completion.

The success of the canal system in the State of New York caused her example to be followed in many other States, and we have now already finished in the United States nearly four thousand miles of canals, which have been constructed at an expense of at least one hundred millions of dollars—divided into State works, and those constructed by incorporated companies.

The rail road system was introduced into this country in 1827, by the construction of a short road of 3 miles in length at Quincy, Massachusetts. This was soon followed by the commencement of the Baltimore and Ohio Rail Road, in Maryland, and the Mohawk and Hudson Rail Road, in the State of New York, which were the first important works of this kind constructed for the conveyance of passengers as well as freight.

The extent of rail roads completed in the United States up to the present time is about the same as that of canals, namely, four thousand miles, and the estimated expense is also about one hundred millions of dollars. Most of these rail roads have been constructed by incorporated companies.

The importance of Internal Improvements to the agriculturist is shown in a striking light by a calculation of the tonnage which is transported on the canals of New York. The amount of tonnage of agricultural produce carried on those canals for the last 8 years, was 2,881,467 tons, or 360,183 tons annually, on which the tolls paid amounted to $706,312. If we take the customary freight paid the owners of boats, which is the same as the tolls, then the total annual freight and tolls on this produce was $1,412,624.

To transport the same tonnage on common roads would cost at least twenty cents per ton per mile. The above tonnage passed over about two hundred miles of canal, consequently the ordinary carriage by animal power, on common roads, would have been $40 per ton.

Cost of transportation of 360,183 tons, on common roads at $40	$14,407,320
Cost of transportation and tolls on canals, of the same tonnage, as above,	1,412,624
Annual saving to the agriculturists,	$12,994,696

on the produce which passes on the New York State Canals, the average value of which produce, in market, is about nineteen millions of dollars. Besides this decreased expense to the agriculturists, there is a saving in transportation on the products of the forest, manufactures, merchandize, and other articles, in which the farmer, of course, participates.

The advantages of an Atlantic Market, it will be seen, have thus been opened and secured to the people of the West, and other portions of the interior, by these great public works.

We reserve, for a future occasion, a variety of statements which it is our intention to present, relative to the progress and present condition of Canals and Rail Roads throughout the United States.

SUMMARY OF THE CENSUS OF THE UNITED STATES, JUNE 1, 1840.

States and Territories.	Whites.	Free Coloured.	Slaves.	Total Population.
Free or non-Slaveholding States.				
Maine,	500,438	1,355		501,793
New Hampshire,	284,036	537	1	284,574
Vermont,	291,218	730		291,948
Massachusetts,	729,030	8,668		737,698
Rhode Island,	105,587	3,238	5	108,830
Connecticut,	301,856	8,105	17	309,978
Total, New England,	2,212,165	22,633	23	2,234,821
New York,	2,378,890	50,027	4	2,428,921
New Jersey,	351,588	21,044	674	373,306
Pennsylvania,	1,676,115	47,854	64	1,724,033
Ohio,	1,502,122	17,342	3	1,519,467
Indiana,	678,698	7,165	3	685,866
Illinois,	472,254	3,598	331	476,183
Michigan,	211,560	707		212,267
Wisconsin,	30,749	185	11	43,112
Iowa,	42,924	172	16	30,945
Total, Free States,	9,557,065	170,727	1,129	9,728,921
Slaveholding States.				
Delaware,	58,561	16,919	2,605	78,085
Maryland,	318,204	62,078	89,737	470,019
District of Columbia,	30,657	8,361	4,694	43,712
Virginia,	740,968	49,842	448,987	1,239,797
North Carolina,	484,870	22,732	245,817	753,419
South Carolina,	259,084	8,276	327,038	494,398

States and Territories.	Whites.	Free Coloured.	Slaves.	Total Population.
Georgia,	407,695	2,753	280,944	691,392
Florida,	27,943	817	25,717	54,477
Alabama,	335,185	2,039	253,532	590,756
Mississippi,	179,074	1,369	195,211	375,654
Louisiana,	158,457	25,502	168,451	352,411
Arkansas,	77,174	465	19,935	97,574
Tennessee,	640,627	5,524	183,059	829,210
Kentucky,	590,253	7,317	182,258	779,828
Missouri,	323,888	1,574	58,240	383,702
Total, Slave States,	4,632,640	215,568	2,486,226	7,334,434
Total, United States,	14,189,705	386,295	2,487,355	17,063,355

PROGRESS OF POPULATION IN THE UNITED STATES FOR FIFTY YEARS, from 1790 to 1840.

First Census, August 1, 1790.

	Whites.	Free Coloured.	Slaves.	Total.
Free States,	1,900,772	26,831	40,850	1,968,453
Slave States,	1,271,692	32,635	645,047	1,961,374
Total,	3,172,464	59,446	697,897	3,929,827

Second Census, August 1, 1800.

Free States,	2,601,509	47,154	35,946	2,684,609
Slave States,	1,702,980	61,241	857,095	2,621,316
Total,	4,304,489	108,395	893,041	5,305,925

Third Census, August 1, 1810.

Free States,	3,653,219	78,181	27,510	3,758,910
Slave States,	2,208,785	108,265	1,163,854	3,480,904
Total,	5,862,004	186,446	1,191,364	7,239,814

Fourth Census, August 1, 1820.

Free States,	5,030,371	102,893	19,108	5,152,372
Slave States,	2,842,340	135,434	1,524,580	4,502,224
Total,	7,872,711	238,197	1,543,688	9,654,596

Fifth Census, June 1, 1830.

Free States,	6,876,620	137,529	3,568	7,017,717
Slave States,	3,660,758	182,070	2,005,475	5,848,303
Total,	10,537,378	319,599	2,009,043	12,866,020

Sixth Census, June 1, 1840.

Free States,	9,557,065	170,727	1,129	9,728,921
Slave States,	4,632,640	215,568	2,486,226	7,334,434
Total,	14,189,705	386,295	2,487,355	17,063,355

OCCUPATIONS OF THE PEOPLE, BY THE CENSUS OF 1840.

Number of persons employed in Agriculture.		Manufactures.	Commerce.
New England States,	414,138	187,258	17,157
Middle States,	808,633	333,947	50,077
Southern States,	955,729	87,955	12,962
Southwestern States,	650,546	37,899	14,496
Northwestern States,	890,905	144,690	22,315
Total, 1840,	3,719,951	791,749	117,607
Total, 1820,	2,070,646	349,506	72,493

Other Occupations, by the Census of 1840.

Number of persons employed in mining in the United States,	15,211
" " " Navigation of the Ocean,	56,021
" " " Internal navigation	33,076
" " " Learned professions, including engineers,	65,255

COMMERCE AND NAVIGATION OF THE UNITED STATES.

The Report of the Secretary of the Treasury, on the Commerce and Navigation of the United States, for the year ending June 30, 1844, has just been published by the Department, and we have only space to select a summary of a few of the most important statements contained in this document, which is always considered the most valuable of any issued from the Treasury Department, inasmuch as it shows the actual condition of our trade with foreign countries, and the progress of our navigation.

The total amount of exports for the year ending June 30, 1844, was as follows :—

Products of the United States,	$99,715,179
" of foreign countries,	11,484,867
Total exports,	$111,200,046
Amount exported in American vessels,	78,450,529
" " in foreign vessels,	32,749,517
	$111,200,046
Imports in American vessels,	94,174,673
" in foreign vessels,	14,260,362
Total imports,	108,435,035
The amount of specie and bullion imported, was,	5,830,429
" " " " exported, was	5,270,809

It will be observed that the amount of our exports exceeds that of our imports by $2,765,011, which is a favourable indication, and another proof of the benign effects of our present protective tariff.

The exports of domestic articles are classed as follows :—

Products of the sea, (fisheries,)		$3,350,501
" of the forest, (lumber, ashes, &c.)		5,808,712
" of Agriculture, viz :		
Cotton,	$54,063,501	
Tobacco,	8,397,255	
Flour,	6,759,488	
Wheat,	500,040	
Indian Corn,	404,008	
Indian Meal,	641,029	
All other agricultural products,	9,173,089	
		79,938,410
Manufactures :—		
Cotton goods,	2,898,780	
Gold and silver coin,	183,405	
All other manufactures,	6,680,944	
		9,763,129
Articles not enumerated,		854,427
Total,		$99,715,179

Tonnage entered and cleared from the United States, for the year ending June 30,1844 :—

	Entered. Tons.	Cleared. Tons.
American vessels,	1,997,438	2,010,924
Foreign vessels,	916,992	906,814
Total,	2,894,430	2,917,738

Tonnage owned in the United States :—

	Tons.
Registered tonnage,	1,068,765
Enrolled and licensed tonnage,	1,109,614
Fishing vessels,	101,716
Total,	2,280,095

Tonnage built in the United States during the year ending June 30, 1844 :—

	Tons.
Registered,	38,921
Enrolled and licensed,	64,616
Total,	103,537

This Report we shall take occasion to examine more in detail, and shall give in our next number, the results as they affect the business of the country; comparing them with previous similar statements, to show the relative progress of trade with foreign countries.

HISTORICAL SKETCH

OF

CONTINENTAL PAPER MONEY.

In this brief History of Continental Paper Money, I shall endeavour to trace its origin, rapid increase and downfall; the cause of its depreciation; the honest intention of Congress to redeem it; set forth the mode suggested by that body for its full payment; and incidentally show its powerful, if not indispensable agency in gaining our Independence.

I propose, moreover, to demonstrate, that the non-redemption of that paper money operated upon the people of that day, by its gradual depreciation, [until its final extinction,] as nothing more than a moderate tax; that no sentiment of repudiation was ever entertained by Congress; that many examples, before and since, both in Europe and America, may be alleged, in extenuation of the neglect this paper met with; and I shall conclude with a short review [by a foreign pen principally] of the temper of the people during the Revolution; the effect this unsettled currency, for so long a period, had on their morals; and attempt a comparison between the Americans of that day and of this.

On the 10th of May, 1775, immediately after the battle of Lexington, Congress prepared its first emission of Continental Colonial Bills, and on the 22d of June, as soon as the news of the battle of Bunker Hill reached Philadelphia, two millions of Spanish milled dollars, [so called,] purporting to be for the defence of America, were put in circulation; the confederated Colonies standing pledged for their redemption.

Congress appointed twenty-eight citizens of Philadelphia to sign and number the bills: the names of two being necessary to each bill. Each gentleman was allowed, out of the Continental treasury, one dollar and one-third for each and every thousand bills signed and numbered by him. At foot will be found the names of the persons entrusted with this duty.*

Contracts were made with printers for proper paper, and for printing them. To administer these paper funds, joint treasurers were appointed at a salary of five hundred dollars; and the number of inhabitants of all ages, including negroes and mulattoes, in each Colony, was taken, by approximation of course, in order to levy the ways and means to pay the bills whenever they should be presented at the treasury. They were taken for taxes and cancelled; and in order to keep up their credit, the treasurers were directed, whenever they happened to receive silver or gold, to advertise their readiness to pay the same for Continental Bills to all persons requiring an exchange.

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* Luke Morris,
Samuel Meredith,
Judah Foulke,
Samuel Morris,
Frederick Kuhl,
Robert S. Jones,
Thomas Combe,
Ellis Lewis,
John Mease,
Thomas Lawrence,
Daniel Clymer,
John M. Nesbit,
Thomas Barclay,
John Bayard,
Wm. Craig,
Thomas Bartow,
John Shee,
Isaac Hazlehurst,
Robert Morris,
Anthony Morris,
Mordecai Lewis,
George Mifflin,
Robt. Tuckniss,
Andrew Bunner,
William Jackson,
Jos. Sims,
James Milligan,
James Reed.

In November of the same year, three millions came out in bills of various value, as low as one-third, one-half, and two-thirds of a dollar, and from one dollar to eighty. The Colonies were called upon to sink *proportionally* a sum of three millions. In fixing the proportion to redeem that amount, Virginia was rated the highest, and stood charged with - - - - - - - - - - - - - $496,000

Massachusetts came next, at - - - - - - - 434,000

Pennsylvania, third, at - - - - - - - - - - 372,000

Maryland, fourth, at - - - - - - - - - - - 310,000

and in the fifth class there are four Colonies, all rated alike; namely, Connecticut, North Carolina, South Carolina, and New York!

Each of these rated at - - - - - - - - - $248,000

By the foregoing scale we find the relative wealth, by Congressional estimation, of these Colonies, at the beginning of the war, sixty-eight years ago. It is worthy of remark, that the State of New York, the capital of which was then unoccupied by the enemy, is placed at little more than half of Massachusetts, while Boston was in the possession of the British.

On the occasion of a subsequent recommendation of a new tax, when the city of New York was held by the British, Congress assessed the State of New York at one-fourth of Virginia and Massachusetts, and at a less sum than New Jersey. The city of New York, at that period, was a town of small dimensions and moderate commerce.

In the month of June of 1787, on my return from a residence of a few years in France, I arrived at that city, and found it a neglected place, built chiefly of wood, and in a state of prostration and decay. A dozen vessels in port; Broadway, from Trinity Church inclusive down to the Battery, in ruins, owing to a fire that had occurred when the city was occupied by the enemy, during the latter end of the war. The ruined walls of the burnt houses standing on both sides of the way, testifying to the poverty of the place, five years after the conflagration: for although the war had ceased during that period, and the enemy had departed, no attempt had been made to rebuild them. In short, there was silence and inactivity every where; and the whole population was very little over twenty thousand.

One can scarcely realize her rapid increase from so small a condition, at so recent a period, to her size and importance in the present day, when she may be classed for population, wealth and trade, among the chief cities of the world.

Before the close of the year 1775, a census of the inhabitants was ordered by Congress for a due apportionment of taxes; and on the last day but one of that year, it was resolved that the silver and gold in the treasury be counted, and forwarded to the northern army under a guard, and that the treasurers be empowered to employ a broker to collect silver and gold in exchange for Continental Paper.

Early the next year, difficulties began to arise. The bills were sometimes refused; confidence was weakened, and depreciation followed. Then came from Congress and the committees of safety, threatening resolutions denouncing the refractory. It was the first serious emergency, and required prompt relief. Patriotic men who had the means, stepped forward to redeem the bills at par; some of whom exchanged as much as a thousand pounds in silver for a like sum in paper. When Congress, hastening to propose a remedy, "Resolved, that if any person shall hereafter be so lost to all virtue and regard for his country, as to refuse to receive the bills in payment, or obstruct and discourage the currency or circulation thereof, and shall be duly convicted by the committee of safety of the district, such person shall be deemed, published and treated as an enemy of the country, and precluded from all trade or intercourse with the inhabitants of these colonies."

On the 26th of December, 1776, General Washington was authorized to arrest and confine those who rejected the Continental currency, and make a return of their names to the authorities of the States in which they resided. The council of safety of Pennsylvania was invited to take most vigorous and speedy steps for punishing all such as refused the bills, and the General was directed to give aid to the council: meantime Virginia and the other States were besought to furnish all the gold and silver they could procure, and take paper in exchange.

In May, 1776, five millions were again emitted, and in the autumn, five millions more. Although some specie was imported, it could not avail against such profuse issues. Credit, already on the wane, continued to sink. The States did not respond to the call for aid; the power of taxing was virtually denied, by its shackled conditions in the articles of confederation, and paper money continuing to depreciate, an attempt was made, in imitation of the mother country, to raise a revenue by the establishment of a national lottery. The trial was a failure; for the scheme, which was to sell tickets *for specie*, at twenty dollars, and pay the prizes in treasury notes, bearing four per cent. interest, did not induce many to adventure; so that no other resource was left for the prosecution of the war, than a fresh emission of paper money. But the people refusing to sell their produce for it at par, Washington was authorized to seize the supplies for the army wherever he could find them, and imprison those who rejected the bills offered in payment.

The years 1776 and 1777 proved as unpropitious to the paper credit as the preceding; and very strong measures were resorted to for the purpose of fixing, by constraint, a value on the currency; of compelling the people to receive as substance, a mere shadow; of putting the stamp of reality on a fiction: measures which were at variance with justice and expediency, and which operated on the people with the harshness of despotism. The resolutions which followed will show the bad temper of the great men who ruled at the head of affairs, and their momentary forgetfulness of the rights of their constituents.

On the 3d of December, 1777, Congress recommended to the legislative authorities of the respective States to enact laws, requiring persons possessed of bills of credit, struck under the sanction and authority of the King of Great Britain, forthwith to deliver the same to be exchanged for Continental Money: and those which shall not be so delivered in, shall thenceforth become utterly irredeemable.

Again they "Resolved (in 1777), that the Continental Money ought to be supported, at the *full* value expressed in the respective bills, by the people of these States, who stand bound to redeem the same according to the like value, and to guard against the pernicious artifices of the enemies of liberty, who impair the credit of said bills by *raising the nomina* *value of gold and silver.*" It was further "Resolved, that all bills of credit emitted by Congress ought to pass current in all payments, trade and dealings, in these States, and be deemed in value equal to *the Spanish dollar;* and it is recommended to the Legislatures of these States, to pass laws inflicting forfeitures and other penalties on all who do not sell their lands, houses, goods, &c., for Continental Bills at *specie value;* and that the said Legislatures be requested to enact laws to make the bills of credit issued by Congress *a lawful tender* in payment of public and private debts; and a refusal thereof, *an extinguishment of such debts:* that debts payable in sterling money be discharged with continental dollars at four shillings and sixpence sterling per dollar [that is to say, at par], and that in discharge of all other debts and contracts, Continental dollars pass at the rate of a Spanish milled dollar."

Buoyed up by these enactments, Congress sent forth, on the 22d of May, five millions of dollars of various denominations, decorated with new emblems, escutcheons and secret marks, to prevent counterfeiting. And this emission was followed up by another of one million, and on the 7th of November by one million more.

The pernicious legislation just adverted to could result in nothing but the ruin of the confiding patriot, while it enabled the unprincipled debtor to pay his debts at an enormous discount. That result soon became evident, and to a degree so alarming, that Congress earnestly besought the States to repeal their iniquitous tender-laws; those very laws which had been so pressingly recommended by that body itself not many months before.

The whole amount of paper money issued during the war, was about three hundred millions of dollars; but the collections made by the Continental government in various ways, cancelled, from time to time, the one-third: so that the maximum of circulation, at no one period, exceeded two hundred millions. Nor did it reach that sum, until its depreciation had compelled Congress to take it in, and pay it out, at the rate of forty paper dollars for one in hard money.

It kept nearly at par for the first year, during which period only nine millions were issued; an amount about equal to the specie then held in all the Colonies. And when used in that moderate way, it passed with very little depreciation; but soon after, when the emission increased rapidly, it fell proportionably in value, going on from year to year, in its downward course, until Congress, as we have seen above, fixed the scale, by law, at forty for one. But million following million in quick succession, lessened its exchangeable rate, from day to day, to the agio of five hundred, and then one thousand, for one, when it ceased to circulate.

Congress had exchanged some of the notes at forty for one, by giving the holder loan office certificates at par, and offered to redeem the whole in the same way, at one thousand for one, when they had sunk to that price. But those very loan office, and other certificates of debt, bore in market no higher price than two shillings and sixpence on the pound, or eight dollars for one; so that very few availed themselves of that offer.

Those public securities bearing various names, such as loan office certificates, depreciation certificates, final settlements, &c., were given to the public creditors, who had demands for moneys lent, supplies furnished, services rendered, &c., and constituted the Congressional debt at the end of the war. They consisted of obligations or bonds, *bearing* *interest* at six per cent., and were entirely distinct in character and tenor from the money bills, which bore *no interest*, and were used altogether as currency. The value of these certificates in market, as I have already said, was not more than seven or eight for one, until the adoption of the present Constitution in 1789, when they were funded, and rose to par.

In the Journal of Congress of the 29th April, 1783, an estimate of the whole revolutionary debt is given [except the paper money], and it stands thus:—

1. Foreign debt to France and Holland, - - -	$7,885,085 00
2. Domestic debt, in various certificates, as above,	34,115,290 06
	$42,000,375 00

The foreign, bearing interest at four and five per cent., and amounting to - - - - - - -	$369,038 06
The domestic at six per cent., and amounting to - -	2,046,917 04
	$2,415,956 10

When the Constitution, by which we are now governed, went into operation, Alexander Hamilton, the first Secretary of the Treasury, added to the domestic debt the claims held by several States against the national exchequer, to the amount of twenty-one million five hundred thousand dollars, and then funded the whole, by putting a part on interest at six per cent immediately; postponing a part, without interest, for ten years, and then to bear six per cent.; and the remainder on immediate interest at three per cent. The arrears of six years' interest were added, which, with some other unsettled claims, made the whole debt amount to ninety-four millions.

Accustomed as we are, at the present day, to the large expenditure of the federal government, we may well be astonished at the economy of the first year of Washington's administration, when the civil list was estimated at two hundred and eight thousand dollars, and the war department at only one hundred and thirty-seven thousand, including even the Indian supplies.

The establishment of a revenue to pay the interest on the debt, in 1789, was equivalent to a capital (by bringing that debt to par) of nearly one hundred millions, the greater part of which was held by our own citizens: this was the cause of immediate prosperity, and of the brilliant career which continued for many years after. Every dollar of this aggregate debt was, as we all know, most honourably paid.

I have deviated from the main subject, for a moment, in order to give a brief exposition of the first national debt, under the funding system of a celebrated financier, and now return to the consideration of the unredeemed paper money.

The illustrious statesmen of the revolutionary Congress had the best disposition to pay that currency, and they professed to have the ability so to do. They felt themselves bound in honour to discharge, at their full value, bills emitted by themselves, and bearing on their face a solemn engagement to redeem them in Spanish dollars, or the value thereof, in gold or silver. To do this, however, required a season of tranquillity; but the country was invaded by land and by water; it required power to levy taxes, and this was denied them; it required the industry of peaceful times to enable the people to contribute; but the war, in constant activity, baffled every attempt at regular employment. Congress had not even a choice of evils; they had no alternative. One source of revenue only was at their command, and that was the emission of bills of credit. The very necessity of the case forced them to misuse and abuse it; for even in its depreciated condition, paper money offered facilities so attractive, that the great men at the head of affairs, always intending to pay them, were glad to find the people willing, at the current exchange, to receive that which could be so easily and liberally supplied.

"Who," said a member during a debate upon this subject, "will consent to load his constituents with taxes, when we can send to our printer and get a wagon load of money, and pay for the whole with a quire of paper?" And with wagon loads thus cheaply obtained, they carried on the campaigns of the two years, 1778 and 1779, keeping an army of thirty or forty thousand men in the field, issuing paper to the amount of sixty-three millions for the former year, and seventy-two millions for the latter; and thus, with an active printing press, and a few commissioners hired by the day or by the job to sign the bills, ways and means were found to defray almost the whole expense of the civil list, the army and navy, and contingencies. There was, indeed, a little hard money passing through the treasury. The exact sums received in both those years having been officially reported to Congress, stand recorded on their journals. If it were not attested in this authentic shape, it would be difficult to believe it. Marvellous as it may appear, the aggregate of gold and silver received into the treasury for the year 1778 was only seventy-eight thousand six hundred and sixty-six dollars [$78,666]; and for the year 1779 the sum of seventy-three thousand dollars [$73,000]; so that the whole machinery of government was carried on, for *two entire years*, as far as concerned the agency of specie, with one hundred and fifty-one thousand six hundred and sixty-six dollars!! So small an expenditure, *in metallic currency*, shows the powerful agency of paper in the belligerent operations at that critical period; performing as it did, in spite of counterfeits and depreciation, the office of hard money.

This handful of solid coin, which, in gold, would weigh only seven hundred pounds, and might be put into a wheelbarrow, was all that came, as we have seen, into the public chest for two years; and we may not be surprised at government being so chary of it, as to refuse General Washington's demand of a small share, to pay a *part* of the bounty to enlisted soldiers. In denying him, they declared that the precious metals must be kept for the commissaries of prisoners, to be used where paper would not pass.

Paper money continued to be the chief instrument in the hands of government. The press was kept in perpetual motion. Printers who laboured at it obtained an exemption from militia duty. Ragged and torn notes were replaced, and bills of every denomination were issued in millions.

The form of those bills, as settled by Congress, was thus:

CONTINENTAL CURRENCY.

No. ——— *Dollar* ———

This bill entitles the bearer to receive ——— Spanish milled dollars, or the value thereof in gold or silver, according to a resolution of Congress.

On each bill was stamped a rudely printed emblem, with a Latin motto, amounting in number to twenty. Those devices and pithy sentences are said to have been composed by Benjamin Franklin and Charles Thompson, aided by the Latinists of the Continental Congress.

Those mottoes, placed opposite to each denomination of the bills are as follows:—

Denomination of the Bills.	
1 Dollar.	Depressa Resurgit.
2 "	Tribulatio Ditat.
3 "	Exitus in dubio est.
4 "	Aut Mors, aut vita Decora.
5 "	Sustine vel Abstine.
6 "	Perseverando.
7 "	Seranabit.
8 "	Majora Minoribus consonant.
20 "	Vi concitatæ.
30 "	Si recte facies.
30 "	(On the reverse) cessante vento conquiescemus.
35 "	Hinc opes.
40 Dollars.	The only English motto—"Confederation," except on the bills of a fractional part of a dollar.
45 "	Sic floret Respublica.
50 "	Perennis.
55 "	Post Nublia Phœbus.
60 "	Deus regnat Exultet Terra.
65 "	Fiat Justitia.
70 "	Quadrennium Sustinuit, Vim Procellarum.
80 "	Florescebit et in Secula Seculorum.

Eighty was the highest denomination issued.

On the small bills of one-third, one-half, and two thirds of a dollar, " Fugio" was the Latin motto, and in English, "mind your business."

Decorated with these fine maxims, Congress sent forth this *cheap* defence of the nation, with a recommendation to the Legislatures of the States not only to make the bills a lawful tender in payment of public and private debts, but in case of refusal to receive them, to declare such refusal *an extinguishment of the debt.*

They were requested, likewise, to stop the emission of their own *State* paper, and to adopt the Congressional currency for a circulating medium.

Conventions, to consist of four or five adjacent States, were, moreover, designated by Congress as necessary, in order to regulate the price of labour, manufactures, country produce, and all imported goods, as well as the charges of inn-holders ; and to enact suitable laws to empower the commissaries of the army to take from forestallers, engrossers and others, who might have a larger supply than their families required, all such articles for government use as were wanted, and at such cost as the law thus enacted should fix. The price of provisions, and of every thing needed by the army, was to be settled also in this arbitrary way : and all for the purpose, say Congress, of checking " a spirit of sharping and extortion, and the rapid and excessive rise of every thing." Amid all these coercive regulations, it could not but be obvious to every thinking man, that the only cause of the derangement of the prices was the excessive issue of paper.

In the year 1778, a very laudable effort was made to create a sinking fund, by establishing an annual tax of six millions of dollars for eighteen years. A committee was directed to prepare a plan that should specifically appropriate that sum to the extinguishment of the Continental debt. Yet very little confidence was placed in these good intentions, if we may judge by the rapid depreciation at this period ; which, indeed, was such that Congress could no longer force the circulation at prescribed rates, in reference to metallic money ; and it was, therefore, resolved by that body, on the 8th of October, 1778, "that all limitation of prices of silver and gold be taken off."

The circular to the States, when the tax for the year 1779 was called for, is a very moving address, replete with ardent feeling, and contains, among other matter, the following in relation to paper money:—

"Being in the outset at war, without arms or ammunition, without military discipline or permanent finances, without an established government or allies, enfeebled by habitual attachments to our very enemies, we were precipitated into all the expensive operations incident to a state of war, with one of the most formidable nations on earth—we, from necessity, embraced the expedient of emitting paper money on the faith of the United States; an expedient which had often been successfully practised in separate colonies, while we were subject to British dominion. Large issues were of consequence necessary, and the paper currency multiplied, of course beyond what was required for the purposes of a circulating medium. To raise the value of our paper money, nevertheless, and to redeem it, will not, we are persuaded, be difficult." They only ask for time and patience, and fix on the first day of January, 1797, or about eighteen years for the full payment of their debts.

A few months after, when the depreciation of the currency kept on increasing, that illustriousCongress raised its voice again, in the following appeal:—

"America, almost totally stripped of commerce, and in the weakness of youth, as it were, with 'a staff and a sling only,' dared, 'in the name of the Lord of Hosts,' to engage a gigantic adversary prepared at all points, boasting of its strength, and of whom even mighty warriors 'were greatly afraid.' Our enemies prosecuting the war by sea and land with implacable fury, taxation at home and borrowing abroad, in the midst of difficulties and dangers, were alike impracticable. Hence the necessity of new emissions."

The whole of this address, too long for insertion, is evincive of strong anxiety, but without despondency. On the contrary, it speaks throughout the language of patriotic firmness never for a moment admitting a doubt of success. Neither does it attempt to disguise the appalling state of affairs. The naked truth is told, and a remedy proposed for every calamity. Among the numerous vexations which annoyed Congress, loud and frequent complaints refer to monopolizers, and the prodigality of the inferior officers, both civil and military.

New emissions continued until two hundred millions of dollars were in circulation at one time; that is to say, seven or eight times as much as was wanted for a circulating medium: consisting, too, of bills bearing no interest; having no specific fund appropriated for their redemption; nothing in short, but the promises of a government ill organized, and in a state of revolution. They could not fail to break down. No patriotism, however ardent, could sustain them. Yet the brave men, at the head of affairs, went into a computation suited to allay the fears of the people, and showed by a State Paper, which will be presently cited, that resources belonged to the country sufficient to meet all demands.

But the last day of the usefulness of Continental Paper Money was fast approaching. The bills of the individual States had generally become so worthless, that even Congress would not receive them into its treasury. Congressional bills were, however, kept in circulation at a great discount until May, 1781, when they fell to five hundred, and subsequently to one thousand paper dollars for one silver, and ceased as a currency. Two hundred millions lost all their value, and were laid aside.

The annihilation was so complete, that barbers' shops were papered, in jest, with the bills; and the sailors, on returning from their cruise, being paid off in bundles of this worthless money, had suits of clothes made of it, and with characteristic lightheartedness turned their loss into a frolic, by parading through the streets in decayed finery, which in its better days, had passed for thousands of dollars!

The campaign of 1781 was carried on in solid coin; nevertheless the bills of a few of the States still lingered in circulation. I have in my possession the receipt of Thomas Knox, dated at Boston in that year, for three thousand three hundred dollars, for piloting in and out of port, a distance of nine miles each way, the French frigate *L'Astree*, commanded by the celebrated *La Perouse*. The specie price was twenty dollars.

I possess, likewise, orginal documentary papers, in tabular detail, showing a loss, by the public chest of Rochambeau's army, of one million six hundred and sixty-one thousand eight hundred and seventy-two dollars. The Intendant of the Army endorsed on the bundles—"This paper, being at present valueless, the loss must be charged to the king." But it must be recollected, that for some years its most favourable discount was forty for one.

In General Washington's account current with the United States, the last transaction in paper currency is dated May, 1781.

The discredit and final rejection of that money was owing, in a great measure, to the illiberal terms of the confederation. Had Congress possessed, unfettered, the power of taxation and levying of imposts, the emissions would have been moderate, and somewhat proportioned to the specie in the country. But what could they do under such a compact as follows:

1st. They were authorized to recommend to the several States, and nothing more, *the consent of every one of which* was necessary, to give legal sanction to any act so recommended.

2dly. They could not assess or levy taxes.

3dly. They had no power to execute punishments, except in the military department.

4thly. They could not regulate trade.

5thly. They could institute no general judicial powers.

6thly. Neither could they regulate public roads, or inland navigation.

With such an inefficient form of government, they failed in almost every appeal for pecuniary aid. They were even denied, by the single veto of *Rhode Island*, the establishment of an impost of only five per cent. on imported goods, which after great difficulty and delay, had been ratified by all the other States. Unanimity being a constitutional requirement, that measure, so obviously necessary, so moderate in its amount, so gentle and equal in its operation, was defeated by the negative of the smallest State in the confederation. Nor could the entreaty of Congress, contained in a long argumentative report, addressed to Rhode Island, and drawn up by Alexander Hamilton, James Madison, and Thomas Fitzsimmons, cause that State to retract. A letter from Benjamin Franklin, on this subject, dated Passy, December 23, 1782, says: "Our people certainly ought to do more for themselves. It is absurd, the pretending to be lovers of liberty, while they grudge paying for the defence of it. It is said here, that an impost of five per cent. on all goods imported, though a most reasonable proposition, had not been agreed to by all the States, and was, therefore, frustrated."

Sustaining the bills of credit, by the public, under such circumstances, and for the length of time they did so, appears to me, one of the most praiseworthy passages in our revolutionary history, pregnant alike with honor to our forefathers for their confidence in the illustrious administrators of the government, and with fidelity to the glorious cause for which they fought. And this reliance on the honorable intentions of the Congress of that day is fully vindicated by a manifesto issued by that body, which, although inserted in a former essay on this subject, is, from the noble sentiments it contains, worthy of a second transcript here.

"Suppose," says the Congress of 1779, "that at the conclusion of the war, the emissions should amount to another hundred millions; then the whole national debt of the United States would be three hundred millions. There are at present three millions of inhabitants in the thirteen States. Three hundred millions of dollars divided among three millions of people, would give to each person one hundred dollars. And is there," they ask, "an individual in America, unable, in the course of eighteen or twenty years, to pay that small sum? Again, suppose the whole debt assessed, as it ought to be, on the inhabitants, in proportion to their respective estates, what would then be the share of the poorer people? Perhaps not ten dollars! And if twenty years be taken to pay the debt, the number of inhabitants will be more than doubled, and the ability to pay increased, of course, more than two-fold."

This encouraging language was held on the 13th of September, 1779. Subsequently they recur to the same subject thus: "Paper money is the only kind which will not make unto itself wings and fly away. It will remain with us; it will not forsake us." They then repeat their conviction of the ability of the country to redeem it; and having pledged for the support of independence their lives, their fortunes, and their sacred honour, the same pledge is given to the public for the full payment of all their paper emissions. A contrary sentiment is rejected with scorn; and proceeding in their address, with the earnestness of honest men, they speak of a bankrupt, faithless republic, as a novelty in the political world. "It would appear," say they, "like a common prostitute among chaste and respectable matrons. The pride of America revolts from the idea. Her citizens know for what purpose these emissions were made, and they must be redeemed. He must entertain a high opinion of American credulity who supposes the people capable of believing that *all* America will act against the faith, the honour, and the interest of *all* America. Knowing, as we all do, the value of national character, and impressed with a due sense of the immutable laws of justice and honor, it is impossible that America should think, without horror, of such an execrable deed."

Thus spoke the band of able statesmen who governed in those days. No thought of repudiation was for a moment tolerated. They had created the paper currency, they suggested a feasible scheme for its redemption, and they held the honest purpose of executing that scheme. But they had no power. The jealousy of the States counteracted their good intentions. What THEY could not *redeem* themselves, was assumed by a generous constituency. The people who bore the brunt of an eight years' war, and victoriously established independence, sustained, without a murmur, the whole tax, and voluntarily reduced to utter nothingness, the greatest item in the cost of the revolution; and thus waived all claim upon posterity for its payment.

This was, undoubtedly, a severe tax; yet, when examined with care, it will be found less heavy than it seems at first sight. Let us take the largest sum, by which the people could ever have been affected, say three hundred millions, at twenty for one, which is only half the rate fixed by Congress. Twenty for one on three hundred millions, will give fifteen millions of sound money. These fifteen millions having been used as currency for six years, give an annual average of two millions and a half. That sum, among a population of three millions, would not be a poll tax of one dollar; or if the three millions of inhabitants be divided into families of six persons each, making five hundred thousand families, the annual loss per family would be only five dollars! In all probability the *real* loss was less to many, than this proportion; because the bills passed with great activity, from hand to hand, to their last days, even when five hundred for one; never remaining locked up, nor long withdrawn from circulation. They were divided too into small sums, from one dollar to eighty, and always convertible at the current exchange, into every kind of real and personal property; and in their hourly rapid passage, leaving with each temporary possessor, the trifling loss only of their daily depreciation.

No system of credit, as we all now know by sad experience, can be made durable, when in the shape of currency the issues exceed the wants of a medium of trade, or when in the more permanent form of bonds, or certificates of public security, they come forth, without a competent tax to pay the interest, and a sinking fund to discharge the principal. The over-issues in Continental money being excessive, fell off in value, of course, while as a natural consequence, property of all kinds rose in proportion. This increase of price in goods, was attempted to be remedied in most of the States, by acts of limitation, fixing under high penalties the maximum at which property should be sold. These ordinances were rigidly instituted. Stores were broken open by authorized committees, and goods seized and sold at the limited legal prices; while the owners stood accused before the public of a design to depreciate the currency, and were called tories and speculators, and otherwise stigmatized as enemies to their country.

But those high-handed persecutions and robberies did not arrest the depreciation on one side, nor the appreciation on the other. Money sank and goods rose. Yet an army of more than thirty thousand men, and a small navy, were supported; the wheels of government kept in motion, and the enemy kept at bay! How could such paper funds sustain such an expense? A writer in the year 1779, says, "posterity will hardly credit it; but," continues he, "the universal rage and zeal of the people, through all the States, for an emancipation from a power that claimed a right to *bind them in all cases whatsoever*, supplied all defects, and made *apparent* impossibilities, *really* practicable."

Another great error was the making this money a legal tender. It was a source of immense injustice between debtor and creditor. It favoured most, in the language of a cotemporary, the slack, the dissipated, the lazy and dilatory, who paid their creditors often at one-twentieth of the value of the debt when it was contracted. This sad expedient was suggested to the States by Congress itself. But that body, which consisted of about fifty members, whose great abilities and spotless integrity stand unimpeached, had the candor to confess their mistake, and urged upon the States an immediate repeal, which was, after much solicitation, effected; yet not until thousands of fortunes had been ruined, including chiefly the most generous and patriotic; while the benefit went alone to the avaricious and idle.

The people "worried and fretted" by tender-laws, limitation of prices, and other compulsory means used by the States to force the circulation, and bolster up the value of paper, occasionally appeared heartless and out of patience. That feeling prevailed especially at the time when Congress, in 1780, recommended a monthly tax of fifteen millions, payable in specie or in paper, at forty for one, and was the cause of its failure. The intention of this act was to destroy the bills as they came in, and to issue other bills at par, bearing an interest of six per cent., to an amount not exceeding a twentieth part of the nominal sum thus brought in to be destroyed.

But the community had become momentarily paralyzed, and turned a deaf ear to all new projects. They stood, as an eye-witness says, "amid impending destruction, when all occupations of town and country were nearly at a stop." Government, not having the power to compel the payment of taxes, could only entreat or menace. In vain, however, did they proclaim, threaten, villify, and decree, that "whoever should refuse to receive in payment Continental Bills, should be deemed and treated as an enemy of his country, and be precluded from all trade and intercourse with the inhabitants; in other words, be outlawed: in vain did they accompany these threats with penal, tender and limitation laws, associated too with military force; all proved ineffectual. This brow-beating and coercion seemed, says Peletiah Webster, who wrote in 1781, "like water sprinkled on a blacksmith's forge, which indeed deadens the flame for a moment, but increases the heat and force of the internal fire." One instance of arbitrary power flowed from those laws which would disgrace the annals of an absolute government; and it was exercised too by Pennsylvania. The General Assembly, on the 25th March, 1780, issued one hundred thousand pounds of paper bills founded on the faith of the State, on some city lots in Philadelphia, and on the Province island at the mouth of the river Schuylkill, which at that time belonged to the State [hence the emission was called island-money]. This issue was followed up by an act, dated December 23d, of the same year, making the bills a legal tender. The penalty for not taking them in payment of goods, lands, &c., was for the first offence, forfeiture of double the sum offered; and for the second offence, a confiscation of half the offender's lands, goods and chattels, and imprisonment of his person during the war.*

Bad as the Continental Bills had become in the latter period of their existence, they always bore the stamp of nationality, and passed currently at the exchange of the day throughout the land; whereas the emissions of the States, made on their individual responsibility, and at various rates of exchange, were not received beyond the limits of each State; so that one State would not take the bills of another State. They were only used for municipal purposes and local trade, as wampum had been in the early days of Massachusetts and other parts of New England, bundles of tobacco in Virginia, and stamped wood or leather elsewhere.

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* This debt was subsequently paid in full.

Those persons who happened to be the last holders of the Continental Bills, put up quietly with their loss. The mighty monster, as that expiring currency was called in those days, departed unlamented. An attempt, which proved abortive, was made some time after to dig up its skeleton, but it never was resuscitated. Its services when alive were incalculable; and it cannot be too often repeated, that it saved the State, and gained our independence. It was the cheap price, and our emancipation the rich purchase. To posterity was that independence transmitted, by those who achieved it and paid for it by bearing the whole loss on the paper currency, which was the principal item of its cost.

The Continental Money endured for nearly six years, and during that long period worked as a most powerful state-engine; and was, says a writer who saw its operation, "a prodigy of revenue, and of exceeding mysterious and magical agency. Bubbles of a like sort, in other countries last but a few months, and then burst into nothing; but this held out for years, and seemed to retain a vigorous constitution to its last; for its circulation was never more brisk than just before it died at five hundred for one! and when it expired, it departed without a groan or struggle, or being in the least lamented."

As I have already observed, the loss was divided and subdivided into such fractional parts during the five or six years' circulation of the millions of paper dollars, that they were laid aside, not only unpaid and unhonoured, but even unwept. The people were tired of the daily variation of prices, and felt how ridiculous was the state of a currency which required five hundred dollars in paper, to pay for a breakfast that could be bought for a silver half-dollar. It carried no regret with it, and seems doomed to sleep in silence, unfriended and unsung; unless, indeed, some attempt be now and then made to awaken a transient touch of sympathy, such as I aim at in this humble sketch.

With it disappeared that unjust and erroneous legislation of making paper money a legal tender. Happily, such tyranny cannot return: the Constitution of the United States forbidding the enactment of laws making any kind of money a tender, except gold and silver.

Vice and immorality were greatly encouraged, no doubt, by that ever-varying currency. This I grant, yet something I hope to offer in extenuation.

We cannot deny that, during the revolution, laws were broken, morals debased, and the nation turned into a gambling community, which upset the fortunes of thousands, broke down trade, paralyzed industry, and scattered ruin far and wide. Our own historians have dwelt in sorrowful and emphatic terms upon those sad times; nor are the notices of foreign authors less instructive and interesting. Gordon, in his history of the Independence of the United States, says, that without paper money the Americans could not have carried on the war. The public benefit of it in that instance will compensate, in the estimation of patriotic politicians, for the immense evils of which it has otherwise been the occasion. The tender-laws on one hand, and depreciation on the other, rendered it the bane of society. All classes were infected. It produced a rage for speculation. The mechanic, the farmer, the lawyer, the physician, the member of

Congress, and even a few of the clergy, in some places, were contaminated. The morals of the people were corrupted beyond any thing that could have been believed, prior to the event. All ties of honour, blood, gratitude, humanity and justice, were dissolved. Old debts were paid when the paper money was more than seventy for one. Brothers defrauded brothers, children parents, and parents children. Widows, orphans, and others, were paid for money lent in specie, with depreciated paper, which they were compelled to receive. A person who had been supplied with specie, in the jail of Philadelphia, while the British had possession of the city, repaid it in paper at a tenth part of its value.

Stedman, an officer in Cornwallis's army, who wrote an account of the American War, treats this subject copiously and impartially. I omit, however, some extracts that I had prepared, in order to introduce the opinion of a distinguished Frenchman, made up from personal association with the American people when in the height of the Revolutionary War. But before I transcribe his judgment of our countrymen, I may remark, that at one period of the contest there was, as is conceded in the Journals of Congress, an absence of exertion approaching to dangerous indifference, and which elicited strong appeals from that body. This apathy attracted the attention of foreigners employed in our army, and became the subject of an official communication from one of them, Mons. Du Portail, who was Colonel in the French service, and Brigadier General in the American army. He resided many years in Pennsylvania after the peace of 1783, and in 1791 returned to France, where he became minister at war. The despatch, from which I take the following extracts, is dated at the encampment at White Marsh, 12th November, 1777, and is addressed to the Comte de St. Germain, the then minister of war to Louis XVI., and is marked private. The following is a translation of them:—

"Will, or will not, the Americans obtain their independence? In France, where things are estimated according to the naked facts of passing events, they will answer affirmatively. But we, who see how things are managed here, think differently. To be candid, I must say that it is not owing to the good conduct of the Americans that the campaign closed with tolerable success, but rather in consequence of the blunders committed by the English."

"Before the war the Americans, without living in luxury, possessed every thing necessary to make life agreeable and happy. They passed a great part of their time in smoking, drinking tea and spirituous liquors. Such was the customary habits of the people. Is it surprising, then, that a sudden change from such effeminacy to the rugged and painful duty of a warrior, should lead them to prefer the yoke of the English, to freedom bought at the cost of all those comforts of life? What I am about to say, my lord, may surprise you, but such is the fact: this is a sluggish people, without energy, without vigour, without affection for the cause in which they are engaged, and which they sustain simply by the impulse or influence which put them in motion at the outset. There is an hundred times more enthusiasm for the revolution, in any coffee-house whatever in Paris, than in all the United States put together. It will, therefore, be expedient, in order to finish the revolution, that France should supply this country with every thing necessary, so as to relieve the people from the burden of the war. It will cost France a few millions, but they will be well employed in annihilating the power and authority of the English, who, when stripped of their colonies and their commerce, will lose their greatness, and leave France without a rival."

"Upon duly considering the general aspect of affairs, it appears to me that what is passing in America is suited to disgust Europeans, and prevent their interfering in the concerns of the colonies of this continent."

Such is the picture of our countrymen, drawn by a Gallo-American officer. I intended to have added some extracts from the French pens of Brissot de Warville, the Duke de Liancourt, and Messrs. Volney and Talleyrand; but I have already reached the limits usually assigned to papers communicated in this form, and will only add, in reference to Monsieur Du Portail's opinions, that his prejudice and ignorance may be found repeated and amplified in the writings of all the above named distinguished foreigners: whose fanciful theories, presumptuous prophecies, and absurd conclusions, have turned out, in the march of time, only the more glaringly false and preposterous, the one than the other! Those *indolent* Americans of Du Portail have continued to be, what they always were, intelligent, brave, industrious and enterprising. Some passing relaxation of revolutionary zeal may have happened, when the ardour of the people fell short of the wishes of their more eager rulers; but, in the main, our countrymen have not been sluggish, and certainly were never indifferent on the subject of their independence. How could it be so, when, with the "go ahead" motto in their hearts and in their actions, they have built up an empire as powerful and populous, at this day, as was France itself, when our fathers first landed on the shores of Virginia and on the rock of Plymouth? A space of time from that period to this, for the creation of a nation of nearly twenty millions of people, not greater than two lives of Russian longevity!

Our own Revolutionary Congress, as we have seen, looked "with horror on the execrable deed" of leaving their bills unpaid. More sensitive on this head than their constituents, they trusted to posterity for their honourable discharge: that posterity, nevertheless, down to the present generation, have never bestowed a thought upon the pledged faith of their illustrious fathers. They neglected, even in the palmy days of "high built abundance," with "heap on heap" in their Treasury—those days when the States, individually, were solicited to relieve the general government of its vast surplus revenue—they neglected, even then, to look back upon that just debt, and to remember favourably those bills that stood guard, as it were, in times of imminent danger; answering the calls of every department of government and of the people in their various occupations; carrying us through the perils of a long war, with pledge upon pledge that they should be honourably paid in the calmer days of peace. They did nothing! nothing!!

But has not "*Honour*," "the moral conscience of a State," been sometimes forfeited elsewhere as well as among us? Painful as this confession is, in reference to our own country, similar examples of shame and reproach, the result, not of dire necessity, but of high-handed fraud, may be traced in the history of other countries. I do not place them here, however, in vindication of ourselves, but to disqualify those European nations, where they have occurred, from pointing the finger of scorn at America.

In Burnet's history of his own times, we find that Charles II. shut up his exchequer for two years, and scattered dismay and ruin throughout his kingdom. Actions commenced against debtors were not allowed to proceed: bankers were broken, and trade paralyzed. The same historian alludes to the disastrous explosion of the South Sea Company, with which may be coupled John Laws's Bank and Mississippi land scheme, the shares of which, in 1718, rose to twenty times their original value, and then sank to nothing. But two operations by France, upon a stupendous scale, are precisely in point, and possess a perfect resemblance to Continental Money, both for the good they effected, and for their subsequent extinction without being redeemed. The first was an emission by the constituent assembly of France, in 1790, of a paper money called *assignat*, which, although based, in general terms, on the proceeds of the sale of the confiscated goods of the church, were so lavishly issued, as to increase to the incredible sum of forty thousand millions of livres, when they depreciated to nothing. Then followed a second kind of paper money, called *mandate*, which even the guillotine of Robespierre could not sustain. They were founded, like the assignat, on confiscated property; and two thousand four hundred millions of livres were issued, which, after defraying the expense of one campaign, lost all their value.

Philip V., the first Bourbon prince who reigned in Spain, left a debt of forty-five millions of piastres, which his successor refused to acknowledge, and it was left unpaid.

After the battle of the 12th of April, 1782, between De Grasse and Rodney, the shattered remnant of the French fleet, under the Marquis de Vaudreuil, came to Boston. Its outfit and re-embarkation of Rochambeau's army occasioned a vast expense, which was paid by bills on the French treasury. They were drawn at the customary usance of sixty days, but the government of France postponed their payment for twelve months; and to protect the merchants who had negotiated them, from damages, the king retained the bills, and forbade his notaries making any protest.

The men of 1776, upon whom cotemporary writers, in both England and France, have heaped so much opprobrium, and whom we, on the contrary, delight to honour and praise, were they better or worse than their descendants?

The general sentiment is, I think, that we are, at the present day, less strict in the observance of the moral duties of life; less moderate and honest in the pursuit of wealth; in short, that we are a degenerate race. But in all this I believe there is a mistake; and I will endeavour to show that we, of the living generation, stand for *good*, in a scale as well balanced against *evil*, as the men of the last century; and in the exercise of many virtues surpass them.

It is said to be an infirmity of old age, to estimate unfavourably "the sayings and doings" of the present time; and to refer back to the days of early life for bright examples in manners and morals. I am an old man, and I do not attest by my judgment or feelings, the truth of that adage. The present race, the men now in active influence, who form this great nation, are said to have declined in moral worth; to have dishonoured by cunning and crime the cause of republicanism, and disgraced the good name which their revolutionary fathers had established and transmitted.

I offer the following vindication.

My recollection goes back pretty distinctly more than sixty years, and I can aver that crimes of as deep a dye were committed in those days, as strike us with such horror when they now occur. But there did not exist then a legion of newspapers, with agents in all directions, eager to collect, exaggerate and publish; and of course they were not circulated. The utmost extravagance of our times in speculation by *corporations* even, can be matched by *individuals* who lived fifty years ago. Public securities were made to vary from two to twenty-eight shillings on the pound; private associations were formed in all the chief towns to forestall more than half the capital of the first Bank of the United States, by purchasing as high as thirty per cent. advance on the par value, the funded debt which was to constitute the larger part of the stock of that bank. The excitement was great; the project failed, and extensive ruin followed.

But extravagant as were the operations in stocks, they fell far short of the speculations in land. Half of Western New York, large tracts in Pennsylvania, North Carolina, and elsewhere, amounting to many millions of acres, were purchased by individuals as monopolists. Phelps and Gorham from the east, Morris, Nicholson, Greenleaf, Wilson, and others, in the middle States, making Philadelphia their head quarters, acquired and held for a short time such vast possessions, that the debts of Nicholson, yet unliquidated, are said to amount to twelve millions of dollars. Barry and Law aimed at purchasing the whole City of Washington, in 1798. Wilson gave a single bond for a million two hundred thousand dollars, bearing six per cent. interest; and that was but one item in his vast negotiations. The immense loss by these speculators, all of whom failed, did not fall short, perhaps, of those by banks in our times; and those losses were inflicted upon a nation of less than five millions of inhabitants. Robert Morris, too, whose public career had been so splendid, and whose downfall may be mentioned at this distant period without indelicacy, since it is matter of history, spent four years a prisoner in our debtor's apartment, while Wilson, whose ruin was as complete, died in confinement for debt in North Carolina. All their colleagues and adjuncts went to destruction, to the incalculable loss of the very many who trusted them.

What shall we say of lotteries, then a universal expedient for raising money; licensed gambling shops authorized by every State in the Union, and now as universally suppressed.

In politics, slow as we may be in believing it, there was, half a century ago, more violence, more marked separation in social life, more virulent hatred—infinitely more, than now, What aged man can forget the heart-burning and outrage before and during the days of the black cockade, when that badge was worn as the signal of defiance from one party to the other! Then, were the presses of Peter Porcupine and his opponents in full action, and licentious to a degree never yet surpassed. In Congress, on the floor of the House of Representatives, vulgar scuffling, and indecent personalities, disgraced that body. We may name as a prominent example, the contest between Matthew Lyon and Griswold. Burr in the Senate, and Hamilton in the Cabinet, agitated the whole nation by their violent jarring, which ended in the death of the latter by the hand of the former. Compare the riotous elections of those days when federalism and anti-federalism engendered such party heat, with the quiet ballot of the great national election of 1844, when more than two millions and a half of votes were given, without commotion or disorder.

And how can we sufficiently congratulate ourselves on the improvement in temperance! None can estimate its importance so well as the aged. Fifty years ago, it was no disgrace for young men to visit a party of ladies stupified or elevated by wine. Modern manners would not tolerate this. Male servants were generally given to drunkenness: and until arrested by temperance associations, intoxication was threatening us with universal sway.

But it is in religion that the most impressive and most salutary reformation has taken place. This is attested by the great increase of piety, and consequent increase of churches. Those holy temples now filled with devout attendants, were then few in number and sadly neglected. At the period of our revolution, the superstition and cruelty of witchcraft was only passing away, to be succeeded by religious indifference, and even rank infidelity.

Recollect, for a moment, Frederick of Prussia, surrounded by Voltaire, D'Argens, Maupertuis, and in correspondence with D'Alembert and the Parisian encyclopedists; in England, Hume, Godwin, and his wife, Mary Woolstoncraft; in America, Thomas Paine! All uniting to deride and destroy christianity, by ridiculing its ministers and holy doctrines, in writings of unrestrained freedom; by unsettling the belief of the religious, and confirming the unfaithful; by presumptuously putting man's feeble reason in the place of divine revelation.

Set in contrast with those licentious times, the awakened piety of this day, in every church of every sect. Crowds of worshippers testify to the truth of their amendment, by regular and zealous devotion in those seats, which were formerly deserted. This salutary change will check the progress of crime. It has checked it. Isolated instances of high offences are no proof to the contrary. The people collectively become more sober in their habits, and more serious in the worship of God, will find those plague-spots which continue to disfigure their moral character, gradually removed, by the joint influence of temperance and religion.

One distinctive mark of refined civilization has been allowed to form a national trait, by universal consent, abroad and at home; namely, the deference paid to woman.

Every where, within the wide range of our country, she is defended and protected. It is a generous virtue, which foreigners agree, one and all, to allow us. A female may traverse the country alone, and visit every point of the compass, in perfect personal security, and be certain of meeting always with attention and respect; having no other protector, in the steamers and on rail-roads, than their captains and agents. This is notorious and of every day occurrence. Virtuous women, young and handsome, start alone, and without fear, from the Missouri, to descend to New Orleans in the south, or wend their way to the Atlantic, up the Ohio, amid a motley company of entire strangers, and thus traverse thousands of miles, unapprehensive of rudeness or interruption.

In conclusion, let us hope that this improvement in morals, will eventually act as a corrective on the temporary defalcations in the public engagements, which now exist in parts of our country; ever bearing in mind that at the adoption of our national Constitution, there was a public debt of ninety-four millions, the interest on which had not been paid for six years, and the principal was currently sold at the reduced price of twelve dollars for one hundred; yet the whole was paid at par. A similar redemption awaits, I trust, the depreciated State debts of the present day.

The paper money of the revolution, however, was of a character wholly dissimilar. It was a depreciated medium almost during its whole existence; and having sunk gradually to nothing, could never possess the claim for redemption that belongs to a bond, for which full value, as expressed on its face, was paid to government.

But while that artificial currency lasted, it was a happy illusion, which worked the miracle of reality. Without its agency, we should have been subdued, and have crept along, at a colonial pace, as Canada has done. Without it, the valley of the Mississippi would have remained a wilderness; the Spaniards would still have been masters of the great outlets of the south; our manufactures would not have been allowed to reach even to the making of a hobnail, and our star-spangled banner would never have been unfurled.

The cause for which the defunct old Continental Money was put forth, had been gained. It has prevented our subjugation, and placed us on the proud eminence we now occupy. Those who bore its burden, when in transit, bore it cheerfully; and made it the happy instrument of our national existence. In cherishing, with filial affection, the memory of those brave men, we may pass by their faults with indulgence; always resolving to cling with constancy and love, to the privilege of self-government, which they thus won and transmitted.

THE MANUFACTURE OF IRON.

We have been exceedingly desirous, and have taken much pains to present in this, our first number, an account from private sources, which might be relied upon, of the present flourishing condition of the iron manufacture in the several States of the Union; and of the furnaces and forges about to be erected; with a view to show its immense value and importance, and to prove, what we have no doubt is fully susceptible of proof, namely, that the time is not distant when we shall not only have a sufficient supply of every species of it for our home consumption, but that iron will ere long become an article of export from the United States.

Those of our readers who are conversant with the extended manufacture of this most useful of all the metals, without which we should fall back almost into a state of barbarism, will duly appreciate the difficulty which exists of procuring such a statistical account of the quantities and qualities now made in the United States, as would give an approximate knowledge of the immense augmentation which has recently taken place, and is now, in a much increased ratio, taking place, in almost every State of the Union.

Such measures, however, are in progress as will ere long, we doubt not, enable us to achieve much in this particular. Meantime, as it is very desirable to have comparative statements of its progress, and as we mean to devote our best energies to its development in every way, we take the following summary from the Census of 1840, which, imperfect as it is, derives an importance from the fact it exhibits that iron is in some way or other produced in twenty-four States and one Territory; Mississippi and Arkansas being the only deficient States, and Iowa, Florida, and the District of Columbia, the only other sections out of thirty named in the table.

STATES AND TERRITORIES.	CAST IRON.		BAR IRON.		Tons of Fuel consumed.	Men employed, including mining operations.	Capital invested.
	Number of Furnaces.	Tons produced.	Bloomeries, Forges, and Roll. Mills.	Tons produced.			
Maine,	16	6,122	1	....	285	48	$185,950
New Hampshire,	15	1,320	2	125	2,104	121	98,200
Massachusetts,	48	9,332	67	6,004	199,252	1,097	1,232,875
Rhode Island,	5	4,126	.....	....	227	29	22,250
Connecticut,	28	6,495	44	3,623	16,933	895	577,300
Vermont,	26	6,743	14	655	388,407	788	664,150
New York,	186	29,088	120	53,693	123,677	3,456	2,103,418
New Jersey,	26	11,114	80	7,171	27,425	2,056	1,721,820
Pennsylvania,	213	98,395	169	87,244	355,903	11,522	7,781,471
Delaware,	2	17	5	449	971	28	36,200
Maryland,	12	8,876	17	7,900	24,422	1,782	795,650
Virginia,	42	18,810½	52	5,886	36,588	1,742	1,246,650
North Carolina,	8	968	43	963	11,598	468	94,951
South Carolina,	4	1,250	9	1,165	6,334	248	113,300
Georgia,	14	494	29	....	630	41	24,000
Alabama,	1	30	5	75	157	30	9,500
Mississippi,	....	....	.....	....	....	......	....
Louisiana,	6	1,400	2	1,366	4,152	145	357,000
Tennessee,	34	16,128½	99	9,673	187,453	2,266	1,514,736
Kentucky,	17	29,206	13	3,637	35,501	1,108	449,000
Ohio,	72	35,236	19	7,466	104,312	2,268	1,161,900
Indiana,	7	810	1	20	787	103	57,700
Illinois,	4	158	.....	....	240	74	40,300
Missouri,	2	180	4	118	300	80	79,000
Arkansas,	....	....	.....	....	....	......	....
Michigan,	15	601	.....	....	451	99	60,800
Florida,	....	....	.....	....	....	......	....
Wisconsin,	1	3	.....	....	1	3	4,000
Iowa,	....	....	.....	....	....	......	....
District of Columbia,	....	....	.....	....	....	......	....
Total	804	286,903	795	197,233	1,528,110	30,497	$20,432,131

With a view to fix the amount of its manufacture at a stated period, and to facilitate a comparative estimate of its progress, we think it advisable to republish an abstract of a Report made in 1831 by a Committee of a convention of the friends of domestic industry, held in the city of New York in November of that year,—made with great care, by persons of the first respectability concerned in the iron trade, consisting of members from Pennsylvania, New Jersey, Rhode Island, Massachusetts, and Vermont; and although many years have elapsed since that Report was made, and we are well aware that such vast improvements have taken place in the iron manufacture, that scarcely any analogy exists between that period and the present time, yet as it gives the most accurate account which has at any time been laid before the public, we cannot doubt it will prove highly interesting to those more immediately concerned.

Moreover it states many facts strongly elucidating the necessity and policy of a protective duty, which apply with greater force now than at the time the Report was made; for the reasons, that experience since then has fully confirmed the views entertained by that Committee; and that the iron manufacture is now in so much favour with our capitalists, that a very short period under our existing tariff will produce an abundant and cheap supply of it in all its modifications, both for home consumption and probably for exportation.

Besides the many improvements already made, tending to lessen the cost of the manufacture of iron, daily progress is making in new inventions, one of which we learn from good authority is likely to be of paramount value; and that is the ignition of the gases escaping from the furnaces, and their use as a fuel in smelting the ore. A more particular account of a patent recently obtained for the purpose, will be found in a short statement appended to this article. With these few preliminary remarks we proceed to give the abstract of the Report of the Committee, which is as follows, viz:

ABSTRACT OF THE REPORT ON IRON OF THE CONVENTION OF THE FRIENDS OF DOMESTIC INDUSTRY.

Held in the City of New York, November, 1831.

The Committee on Iron respectfully report: That in discharge of the duties assigned them, they have availed themselves of the information obtained by the Convention of manufacturers of iron, recently assembled at Philadelphia, (of which several of your Committee were members,) which information was originally collected for the purpose of answering the call made upon the Secretary of the Treasury at the close of the last session of Congress; and is, they have every reason to believe, as precise and accurate, in all its parts, as any body of facts, of equal magnitude and importance, which under similar circumstances, has ever been submitted to the public. From abstracts of statements made to that meeting, it appears that at 202 furnaces, known to have been in operation, there were made in the year 1830, 155,348 tons of iron.

This iron, further investigation enables your Committee to say, is converted into 90,768 tons of bar iron, and 28,273 tons of castings; which with the bar iron made at the bloomeries, amounting in that year to 5,858 tons, and making a total of bar iron of 96,621 tons, will, if estimated at the average wholesale prices of the principal markets of the country, give an aggregate value for the production of that year of 11,444,410 dollars.

The same statements exhibit for the three years ending with 1830 (when the bar iron made at the bloomeries is reduced into pig iron and added to that made at the furnaces) the following results:

Years.	Iron.	Value.
For 1828,	130,881 tons,	10,861,440 dollars.
" 1829,	142,870 "	11,528,134 "
" 1830,	163,542 "	11,444,410 "

Increase in quantity very nearly 25 per cent. Increase in market value not quite 5 1-2 per cent.

It will be perceived by the last statement, that the increase in value does not keep pace with that of quantity; and your Committee would here for a moment call the attention of the Convention to this fact, affording a practical refutation of the doctrine, that an increased impost necessarily enhances the price to the consumer.

In this instance the average price of bar iron in 1828 was 118 1-3 dollars. In that year an addition to the duty on hammered iron was made of $4 40 per ton, and on rolled of 7 dollars. In the following year the price fell to 114 2-3 dollars, and in 1830 to 96 2-3 dollars; showing a decline in two years of 21 2-3 dollars per ton in the face of the increased duty above mentioned: a decline effected exclusively by domestic competition, inasmuch as no corresponding diminution of price took place abroad, and the fall here was greatest in those markets which are inaccessible to foreign iron.

In making these statements your Committee have been careful to found them upon data which they believe will bear the test of the most rigid scrutiny. They have been particularly cautious to guard against exaggeration. They believe the cause they desire to sustain needs no aid beyond the simple truth.

In further illustration of the facts above stated, and of other beneficial consequences flowing from the system of protection, they beg leave now to refer to the accompanying statements marked A and B. By the one it will be seen that while iron in some foreign markets advanced from 40 to 50 per cent. from 1824 to 1825, and from 1822 to 1825 experienced fluctuations amounting to nearly 75 per cent. on the lowest cost, our own varied but about 17 per cent., including an additional duty of about 5 per cent.; and actually receded at a subsequent period, although sustained by a second addition to the duty, to prices below what had prevailed for ten years before, when the existing duty upon hammered iron was but nine dollars per ton, or less than one-half of that now levied.

This comparative stability, so important to the success of all well-regulated industry, was due exclusively to the domestic supply, which effectually protected the consumer from the foreign speculator, who could otherwise have controlled this market, and would have produced here the same disastrous consequences that ensued in his own.

If such has been the result of protection upon the general market of the country, its effects have been still more striking, when examined with respect to particular, but most important districts. Our western brethren, the hardy pioneers of our country, were restrained and limited in their contest with the wilderness, by the difficulty of obtaining, on almost any terms, this article, so indispensable to their success in every stage of their arduous enterprise. The second statement exhibits the prices of iron of various descriptions, at different periods, at Pittsburgh and Cincinnati—the great marts of the West. Comment can scarcely be necessary upon the facts there disclosed. The decline in price (in some instances more than half) has been in exact proportion with the stability given to the domestic manufacture, by additional impost on the foreign, until it has reached a point that now enables the mechanics of the first-mentioned city, to enter into successful competition with those of almost any other quarter, in the fabrication of nearly every article of necessity, and in one justly esteemed the proudest effort of human ingenuity, they have attained a degree of perfection which enables them to challenge a comparison with the skill and experience of any nation whatever—as the Committee are assured that contracts can be made for any number of steam engines at the prices indicated in the table referred to, it cannot be necessary that they should press this point further. Here your Committee might leave this branch of their subject, satisfied with having, as they believe, demonstrated from facts that protection to the manufacturer, when effectual in amount, and connected with such an assurance of permanence as stimulates enterprize and excites skill, does not operate as a tax on the consumer, but the very reverse. But they believe that facts will justify them in going even further, and will enable them to maintain the position that an impost may, under some circumstances, operate as a tax upon the producer of the foreign article, compelling him, for the purpose of preserving even partial possession of the market, to reduce his own profits in proportion to the increase of impost, which reduction is in fact a contribution to the treasury of the importing country, and may relieve its citizens from the burthen of taxation to that extent. The circumstances under which this may occur are twofold. First, when the importing country is the only, or the principal market for the article in question, and that article one which the exporting country must produce in the manufacture of some other article of greater value. Secondly, where there is an increasing surplus of production in the exporting country, and an extensive and growing manufacture of the same article, in the country where this surplus has heretofore sought a market.

Without detaining the Convention longer than to make a passing reference as an example of the first case to the additional duty of the tariff of 1828 (since repealed) upon molasses, which duty was exclusively paid by the foreign planter, who thus contributed, during its existence, more than half a million of dollars per annum to the support of the government of the United States, the Committee will proceed, in proof and illustration, to the second case, and again refer to the statement marked A, and to that marked C, where, among other facts, it will be seen that in July, 1828, after the intelligence of our additional duty reached England, iron fell at once $4 44 per ton, and that the following year a further reduction of $6 50 was submitted to. Our additional duty gave additional confidence to the American manufacturer; he extended his operations, and increased the supply without advancing the price. The foreign manufacturer could only reach the market by the payment of the additional impost. American competition prevented him from charging this to the consumer, and he was therefore compelled to diminish his profits to that amount, and to the same extent to become a contributor to the treasury of the United States.

An examination of the last-mentioned statement C, will show that by this means, through the instrumentality of American manufacturers, their foreign competitors have been made tributary to the public treasury upon the article of iron, since that article has been really protected, more than two millions and a half of dollars; while the consumer, as has been already shown, has been benefitted to an amount even greater than this.

If it be alleged that the same benefits would have resulted to the consumer—that the same decline in prices would have occurred, without this competition—we answer that such allegation would be contrary to all experience, which has taught all who have given attention to the subject to know, that while we are dependent exclusively upon a foreign supply for any article of consumption, the foreigner is enabled to prescribe his own terms, and that these always, of course, yield him a large profit.

But when domestic skill goes to work to produce the same articles, their prices are reduced, and often to an extent that excites astonishment, when it is accompanied with the knowledge that no sensible change in the cost of production has taken place.

But it may be asked if additional protection, by exciting domestic competition, invariably brings down prices, of what benefit is this protection to the manufacturer? To this we reply, that permanence and stability, and not high prices, are our objects. American manufacturers are not so blind to the constant and inevitable course of events, as not to foresee that as these objects are approached, they must expect a more active competition from their fellow citizens, as well those who are already engaged in the same pursuits, as from others who may be induced to enter upon them. For this they are prepared; they can estimate its extent; and its effects are wholesome and salutary; it stimulates to greater care, economy, industry, and skill: profits are reduced, but they are stable; and the prudent man looks forward with confidence to realizing a fair reward. Against foreign competition there is no guarding, because the manner of its approach can never with certainty be foreseen, nor can its extent be calculated. The ordinary production of foreign industry may, it is true, be calculated with some degree of accuracy, but the extraordinary fluctuations to which their markets are liable from great political convulsions, and other causes, cannot be estimated. Every violent change invariably forces upon our market their vast accumulations, which easily break down the barrier of a mere revenue protection, and involve in ruin all who have essayed competition in the same branch. The consumer receives a momentary benefit, but a reaction certainly follows; great fluctuation engenders a spirit of speculation, and mere gambling is substituted for a regular trade. The frequent recurrence of these evils (every where acknowledged to be such) is only to be prevented by an efficient system of protection.

Having, as they believe, satisfactorily shown the beneficial effects of a system of real protection to the consumer of iron, your Committee will proceed with a few brief remarks upon its influence on the agricultural labour and trade of the country.

From a critical examination of the returns from 73 furnaces and 132 forges in a great variety of situations, the details of which are more particularly stated in the annexed paper marked D,—they find that in the manufacture of the iron in its first stages only, made in the United States in the past year, agricultural produce to the amount of nearly three and a half millions has been consumed by the persons thus employed, which vast sum has of course been paid to the farmer, showing how completely his interest is identified with that of the iron manufacturer, and furnishes him with the means of estimating the probable consequences to himself of the destruction of this branch of industry, and the conversion of so large a body of consumers into cultivators and producers. By the same statement it appears that nearly 25,000 workmen are constantly employed, receiving annually the sum of 7,493,700 dollars, making, with their families, nearly 125,000 persons directly dependent on this manufacture.

For transporting this iron to the markets where it is sold to the consumer, it is estimated that about twelve hundred and fifty thousand dollars are annually paid—being a further contribution to the wealth of the country, through its internal commerce.

These facts show how completely interwoven are the interests of agriculture, commerce, and labour, with those of manufactures.

The last consideration that occurs to your Committee, as within their duty to notice, is the capability of the United States to furnish a supply of iron equal to their own wants. Of this the Committee cannot entertain the smallest doubt. The tabular statements, heretofore referred to, show, that in two years, from 1828 to 1830, the supply has increased very nearly twenty-five per cent.; and it is known that old establishments, in many situations, are enlarging, and new ones erecting—giving the assurance that this increase will be progressive, until not only the domestic market will be fully supplied, but a surplus remain for exportation.

If we compare our situation with that of Great Britain less than a century ago, in this particular, we shall see abundant reason for self-gratulation. Ninety years since, her entire production of iron did not much exceed that which is now made in the State of New Jersey. In 1802, within the limits of a single generation, her furnaces were less in number than those now existing in the United States, and the production not more than will be made here during the present year, 1831—and this without availing ourselves of the means to which she is indebted for the extraordinary change which this short period has effected. We have the benefit of her experience; we can command her skill, if it be necessary; we have the mineral and fuels in unlimited abundance, (which have done so much for her,) when our forests shall fail. Our citizens yield to none in enterprize and ingenuity, when adequate rewards for the exercise of those qualities are held out; and knowing this, with the experience of our rapid progress in the last two years, furnishing, as we now do, more than three-fourths of the entire consumption—is it, we repeat, extravagant to assert that we are fully competent to supply our own wants, and furnish a surplus to minister to those of our neighbours.

In conclusion, your Committee cannot refrain from the expression of the gratification which the result of this investigation has afforded them. Deserted by the Government, and denied that protection which, at the close of the late war, was freely granted to every other interest, this important branch of domestic industry, so essential to the prosperity, if not to the existence, and so closely connected with our national independence, seemed threatened with absolute extinction. A wiser policy, adopted at a later period, aided by the unconquerable spirit of American enterprize, has raised it to the elevated rank it now holds; and to maintain it in which, it asks no sacrifice from our fellow citizens engaged in other pursuits. Grateful for the consideration which its well founded claims for their justice, after years of delay and suffering, at last obtained, it is now returning to the country the full measure of benefit it has received, and will protect them from speculation and monopoly from abroad, should it not again become the victim of that unnatural policy, which would cherish foreign industry while it neglects and destroys our own.

By order of the Committee.

B. B. Howell, *Secretary.*

Supplemental Report.

Before separating the Committee instructed the Secretary to make a further Report of any facts that might be received in time for the permanent Committee. In conformity therewith, he has now to state that Mr. Peter Townsend, who was delegated by those engaged in the manufacture of iron in this city, to visit all the establishments in this State and those east of it, has returned and reported the result of his examinations; by which it appears that in New York there are in operation, of blast furnaces, 8; in Connecticut, 3; and information from other places enumerates furnaces, not before known, to the number of 26; in the whole, 37 additional furnaces, making, of pig iron and castings, 25,250 tons, and a large number of forges employed in converting the pig into bar iron.

There are returns of thirty-two bloomery fires in situations where it was not before known that any existed, making 30 tons each per annum, or nearly 1,000 tons yearly of bar iron by this process; and the returns brought by Mr. Townsend show, that the Committee estimated this kind of iron nearly 1,000 tons too low in the districts which he visited. The result of the whole, if 20,000 tons of the above pig iron were converted into bars, would be:

Bar iron,	14,285	tons.
Bloomed bar iron, as above,	1,960	"
Bar Iron, per former statements,	96,621	"
Total bar iron made in the United States, agreeably to the information received by the Committee to this date,	112,866	"

Stated in pig iron it would be:

Former statement,	163,542	tons.
Pig iron and castings, as above,	25,250	"
Bloomed bar iron, equal to	2,744	"
Total of iron equal to pig iron,	191,536	"

The value of which, according to the mode of estimation already explained, would be 13,369,760 dollars.

It is hardly necessary to add that these additional facts strengthen all the inferences and calculations heretofore made by the Committee.

B. B. Howell, *Secretary.*

New York, November, 1831.

An Appendix to this Report gives the amount of iron imported, according to a statement made by certain memorialists to Congress for a reduction of duty, as follows:

	Tons.	Duty per ton in dollars.	Total duty paid. Dollars.	For 5 years past cost per ton, including duty. Dollars.	Total cost incl'g duty. Dollars.
Swedish and Russian iron,	29,486	22 40	660,486	95	2,801,170
English bar iron,	3,332¼	37 00	123,302	75	249,938
Sheet, rods, &c.,	1,168	78 40	91,571	130	151,840
	33,986		875,359		3,202,948

The following statement shows the annual consumption of iron in this country, as per report made to the Convention of Manufactures of Iron, lately held in Philadelphia:

In 1830 there was made at 202 furnaces,	15,348	tons.
Of which was made into castings,	28,273	"
	127,075	"

Which rendered into bars at 28 cwt per ton would yield,	90,768	tons.
There was made of bloomed iron,	5,853	"
Total bar iron made annually in the United States,	96,621	"
Annual consumption of bar iron in the United States,	130,007	"
Besides what is made from the blast furnaces into castings,	28,273	"
Iron consumed in the United States annually,	158,280	"

STATEMENT A.

Prices of Iron in England, taken from the Invoices of the Importers in New York.

YEARS.	FLAT.	ROUNDS.					SQUARE.		
	Common size.	Common size.	⅝	½	⅜	¼	Common.	½	
1806	£20 6 0	22 6 0	23 6 0	27 0 0			19 6 0		
1808		14 5 0	15 5 0						
1809	14 0 0	15 0 0	16 0 0				14 0 0	17 0 0	
1810	13 0 0	14 0 0		17 0 0			13 0 0	16 0 0	
1815	11 0 0	11 0 0	11 0 0	16 0 0			11 0 0	13 0 0	
1816	10 0 0	10 0 0	10 0 0				10 0 0	12 0 0	
1819	12 6 0	12 6 0	12 6 0				12 6 0		
1820	9 16 9	10 0 0	10 6 0	11 6 0	12 5			11 6 0	
1821	8 15 6	8 15 6	8 15 6	9 5 6	11 14	13 13	8 15 6	9 15 6	
1822	8 0 0	8 0 0	8 0 0	10 3 0			8 0 0		
1823	8 4 0	8 4 6	8 4 6	9 4 6			8 4 0	9 4 0	11 4 0
1824	9 2 0	9 2 0	9 2 0		11 6		9 2 0		
1825	13 15 0	13 15 0	14 6 0				14 6 0	15 6 0	
1826	10 6 0	10 6 0	11 6 0	12 3 0	14 3		10 6 0		
1827	9 13 0	9 13 0	10 0 0		11 7	13 7	9 13 0	10 7 0	11 7 0
Feb'ry 1828	8 9 0	8 9 0	8 9 0			13 0	8 9 0	9 10 0	11 0 0
July 1828	7 9 0	7 9 0	7 9 0				7 9 0		10 5 0
1829	6 0 0	6 0 0	6 0 0				6 0 0		
1830	6 0 0	6 0 0	6 0 0	7 0 0	9 0	11 0	6 0 0		
1831	5 10 0 to £6.	same	same	6 10 0 to £7.	9 0	11 0	5 10 to £6.		

The above prices are pounds, shillings, and pence, sterling, per ton.

In 1806, the difference between common sizes and half inch, was nearly £7 sterling per ton. It required twenty-five years to bring it down to the present difference of about one pound.

B. B. Howell, Esq.:

Sir—I have the honour to hand you the following prices of iron in Sweden, from 1815 to 1831; and you may consider the Russian new sable was at the same prices, and P. S. I. at 20s. sterling, per ton, higher, at the same periods.

Yours, &c. N. SALTUS.

March, 1815, £ sterling	12	0	0	September, 1824, £ sterling	10	7	6
July, 1816,	13	10	0	December, 1824,	11	5	0
October, 1816,	12	10	0	April, 1825,	14	3	0
March, 1817,	13	10	0	September, 1825,	14	19	0
June, 1817,	14	0	0	June, 1826,	12	0	0
February, 1819,	16	10	0	July, 1827,	12	9	0
December, 1819,	13	3	0	October, 1827,	13	5	0
January, 1820,	14	10	0	December, 1827,	13	5	0
June, 1821,	13	5	0	September, 1828,	13	15	0
September, 1821,	11	14	0	May, 1829,	13	15	0
November, 1822,	11	10	0	June, 1829,	13	9	0
April, 1823,	12	4	0	September, 1829,	12	19	0
August, 1823,	11	10	0	December, 1829,	12	0	0
December, 1823,	11	0	0	April, 1830,	11	0	0
March, 1824,	11	5	0	May, 1831,	10	10	0
August, 1824,	10	11	0				

Wholesale Prices of Hammered Bar Iron in the Seaports of the United States.

1793,	90 to 95	dollars	per ton.	1813,	115 to 125	dollars	per ton.
1794,	"	"	"	1814,	125 to 145	"	"
1795,	"	"	"	1815,	130 to 150	"	"
1796,	"	"	"	1816,	110 to 120	"	"
1797,	100 to 105	"	"	1817,	90 to 100	"	"
1798,	" "	"	"	1818,	" "	"	"
1799,	95 to 100	"	"	1819,	" "	"	"
1800,	" "	"	"	1820,	" "	"	"
1801,	110 to 120	"	"	1821,	85 to 95	"	"
1802,	105 to 110	"	"	1822,	" "	"	"
1803,	" "	"	"	1823,	90	"	"
1804,	" "	"	"	1824,	"	"	"
1805,	" "	"	"	1825,	105	"	"
1806,	" "	"	"	1826,	"	"	"
1807,	110 to 115	"	"	1827,	100	"	"
1808,	" "	"	"	1828,	105	"	"
1809,	" "	"	"	1829,	100	"	"
1810,	115 to 120	"	"	1830,	90	"	"
1811,	110 to 115	"	"	1831,	75 to 85	"	"
1812,	" "	"	"				

STATEMENT B.

Showing the effects of a tariff of protection on the article of iron at Pittsburgh and Cincinnati:—

In the years 1818, '19 and '20, bar iron in Pittsburgh sold at from 190 to 200 dollars per ton. Now the price is 100 dollars per ton.

In the same year, boiler iron was 350 dollars per ton. Now at 140 dollars per ton.

Sheet iron was but little made in those years, and sold for 18 dollars per cwt. Now made in abundance and sold at 8½ dollars per cwt.

Hoop iron, under same circumstances, was then 250 dollars, and is now 120 dollars.

Axes were then 24 dollars per dozen, and are now 12 dollars.

Scythes are now 50 per cent. lower than they were then—as are spades and shovels.

Iron hoes were in those years 9 dollars per dozen. Now a very superior article of *steel* hoes at 4 to 4½ dollars.

Socket shovels are made at 4½ dollars by the same individual who, a few years ago, sold them at 12 dollars per dozen.

Slater's patent stoves, imported from England, sold in Pittsburgh at 350 to 400 dollars. A much superior article is now made there and sold for 125 to 150 dollars.

English vices then sold for 20 to 22½ cents per lb.; now a superior article is sold at 10 to 10½.

Brazier's rod in 1824 were imported, and cost 14 cents per lb., or $313 60 per ton. Now supplied to any amount of ¼ to 3-8 diameter, at $130 per ton.

Steam engines have fallen in price since 1823, one-half, and they have one-half more work on them.

The engine at the Union Rolling Mill, (Pittsburgh,) in 1819, cost $11,000—a much superior one of 130 horse power, for Sligo Mill, cost, in 1826, $3,000.

In 1830, there were made in Pittsburgh one hundred steam engines.

In 1831, one hundred and fifty will be made, averaging $2,000; or $300,000 in that article alone.

A two horse power engine costs 250 dollars; six horse, 500 dollars; eight to nine horse, 700 dollars. These last are the prices delivered and put up.

At least 600 tons of iron made in Pittsburgh are manufactured into other articles before it leaves the city, from steam engines, of the largest size, down to a threepenny nail.

Eight rolling and slitting mills, of the largest power, are in the city of Pittsburgh; five of which have been erected since 1828.

Thirty-eight new furnaces have been erected since 1824 in the western parts of Pennsylvania and that part of Kentucky bordering on the Ohio river, most of them since 1828. The quantity of iron rolled at Pittsburgh was in

1828,	tons,	3,291	19	0	0
1829,		6,217	17	0	0
1830,		9,282	2	0	0

Being an increase of nearly 200 per cent. in two years.

The above facts were furnished by members of the Committee residing at Pittsburgh, who vouch for their accuracy.

One fact there stated, suggests the following remarks to the Committee:

To the Report of the Select Committee of the Senate of the United States, on the subject of iron, is appended, among other papers, one in which it is stated, that "it it now ascertained that the superiority of England over France is entirely due to the cheapness of iron: a six horse steam engine, for instance, in France, costs on the average, at least 500 *dollars more than in England,* owing to the cheapness of iron in Great Britain. *It is still dearer in the United States than in France.*"

Here it is asserted that a six horse power steam engine costs 500 dollars more in France than it does in England, and that it is still dearer in the United States than in France. Now it so happens, that in the United States, at Pittsburgh, a steam engine of that power, can be put up, ready for action, for the identical sum of 500 dollars.

Prices of Iron at Cincinnati.

In 1814 to 1818, bar iron 200 to 220 dollars per ton; now 100, 105, 110. The fall in prices has been nearly as follows:

1826, bar iron, assorted,	125 to 135	dollars.	1829, bar iron, ass'ted,	112½ to 122½	dollars.
1827, " "	120 to 130	"	1830, " "	100 to 110	"
1828, " "	115 to 125	"	1831, " "	100 to 110	"

Castings, including hollow ware, 1814 to 1818, 120 to 130 dollars per ton; present price 60 to 65, and the quality much improved.

STATEMENT C.

The duties on iron imported into the United States, were, 1804 to 1812, 15 per cent.; double war duties from 1812 to 1816. In 1816, duties, rolled iron 30 dollars per ton; hammered, 9 dollars. The law of 1816, fixing the duties at these rates, ruined many of the manufacturers and compelled them to abandon their works. By act of April 20, 1818, the duty on hammered iron was raised to 15 dollars. This, in some measure, revived the manufacture, and many, who had abandoned, resumed their operations. The foreign manufacturer, to keep possession of the market, offered his iron at a less price; so that there was an actual decline here. In 1824 the duty on hammered iron was raised to 18 dollars, and in 1828, to $22 40. These additions to the duty had no permanent effect in raising the price. The foreign manufacturer could not advance his prices beyond those of 1824, because the American iron maker supplied the market at those rates; and iron, at a duty of $22 40, sells at less than it did at one of 9 dollars. The foreign manufacturer has been compelled to take the additional duties from his profits; and these deductions from his profits have been paid into the treasury of the United States, without adding to the price paid by the American consumer.

The following table shows the operation of the additional duty levied since 1818 on hammered iron alone:

	Tons.		Duties.	
1818, imported of hammered iron,	13,931		208,950	dollars.
1819, " " "	16,160		242,394	"
1820, " " "	19,531		272,877	"
1821, " " "	15,374		230,413	"
1822, " " "	26,273		378,641	"
1823, " " "	29,014		435,210	"
1824, " " "	21,298		383,364	"
1825, " " "	23,085		428,490	"
1826, " " "	23,837		427,066	"
1827, " " "	21,718		390,924	"
1828, " " "	33,155		663,100	"
1829, " " "	29,202		654,141	"
1830, " " " estimated,*	29,202		654,141	"
Tons	301,880	=	5,369,711	"
Duties at $9, the rate per law of 1816,			2,716,920	"
Gain in the treasury, at the expense of the foreign manufacturer,			2,652,791	"

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* Since ascertained 30,973 tons, of which only 439 tons were British. The small amount of the latter importation, is the best possible evidence of the *bad quality* of English iron, as stated in subsequent pages, and of its unfitness for the usual purposes to which hammered iron is applied. All such iron pays the same duty.

Permanent Committee.

STATEMENT D.

The following calculations were made by Hardman Phillips and George Valentine, Esquires, and are derived from the average returns submitted to the Committee, from two counties, (those most extensively engaged in the manufacture of iron in Pennsylvania,) namely, Centre and Huntingdon, and have been carefully verified by a comparison with returns from 73 furnaces and 132 forges.

For each ton of bar iron and castings made, the following agricultural produce is found to be consumed:

20 bushels wheat and rye,	average at	75	cents,	$15 00
57 lbs. pork,	"	5	"	2 85
43 " beef,	"	4	"	1 72
10 " butter,	"	12½	"	1 25
2 bushels potatoes,	"	30	"	60
½ ton hay,	"	7	"	3 50
For every ten tons of bar iron one horse is employed one whole year, worth $100; and experience shows that the mortality among horses so employed is per annum one in seven, and constitutes a charge, per ton, of				1 43
For fruit and vegetables, of which no return has been made, we feel justified in putting down				1 00
				$27 35

Which, multiplied by the quantity of bar iron and castings, will give the sum of 3,415,850 dollars, paid by the iron manufacturers and those employed by them, to the farmers.

Remarks on the Manufacture of Iron,

And particularly on a new Patent for the use of the Gases escaping from the Furnaces.

The present flourishing condition of the iron trade, and the hope that the present tariff will remain the permanent policy of our Government, are attracting a large amount of capital to this most important branch of national industry. The immense sum invested in the manufacture of iron in Great Britain, attracted to it while that trade was enjoying a more liberal protection there, than it has ever had in the United States, is an important cause, apart from the possession of greater natural advantages, of the ability of the British iron master to undersell every other.

Every addition of capital, therefore, invested in the manufacture of iron in this country, is a further guarantee that the day is not far distant when we shall be able to compete successfully with Great Britain, even under a reduced tariff. Meanwhile, the coal and iron mines are being thoroughly developed; a more perfect system of mining is introduced; the avenues leading to the coal and iron districts are multiplied and improved; instance the Baltimore and Ohio Rail Road, the Chesapeake and Ohio Canal, which under the law passed by the late session of the Maryland Legislature, will undoubtedly be very soon completed to Cumberland; the Reading Rail Road, with its double track and numerous lateral roads, leading right into the heart of the great Schuylkill coal and iron region; then its powerful competitor, the Schuylkill Canal, which is just about to be enlarged so as to admit boats of two hundred tons burthen, whereby the cost of transportation of coal and iron will be considerably reduced below the present prices; the enlargement and improvement of the Morris Canal, to admit sixty ton boats, by which the Lehigh coal and iron region is brought much closer to market, and the cost of transportation from there, as well as from the great iron district of New Jersey, materially reduced. All these, we say, are strong evidences of the rapidly increasing importance of the coal and iron trade, while at the same time they cannot but serve as further inducements for capitalists to invest in an industry no longer at an inconvenient distance from them, but which the improved means of inter-communication has made of ready access, so that capitalists are enabled frequently to visit the scene of their investments.

But as important, if not even more so, than the above, is the fact, that the number of workmen and labourers acquainted with the manufacture of iron, is daily increasing, although still by no means so abundant as could be desired; and further, that more skill and science is being directed towards this subject. As evidence of this, we have the important improvements that have been introduced within the last two years, in the manufacture of iron. Foremost amongst these, is the application of the waste gases escaping out of the tops of the blast furnaces, either to the heating of the steam boilers of the blowing engines, or to the processes of refining and puddling, instead of other fuel. This invention originated in Germany, but for its introduction into the United States we are indebted to Mr. Detmold. We extract from the Report of the Patent Office for 1844, the following mention of this improvement:—

"The use of the gases escaping from the furnaces, illustrates in a very striking manner, the gradual progress of inventions, and the dependance of the useful arts on the progress of science. The first step was to apply the gases which escape from the furnaces in a highly heated state, by conducting them through the flues of boilers, and thus generate steam; and when subsequently the heated blast was introduced, these gases were employed to heat the air in its passage to the furnace. When chemical science, however, turned its searching and analytical inquiries to this branch of the arts, new light was thrown upon it, and the practical man was soon taught that these gases, instead of being pure products of combustion, and non-combustible or carbonic acid gas, are carbonic oxide and carburetted hydrogen, combustible gases; and that for ages the iron master had been wasting immense quantities of fuel, in the form of invisible gases and smoke.

"That at once opened another field to the inventor; he directed his attention to the condition under which these gases escape, and found that they could be taken from the furnace at a sufficiently high temperature to unite with the oxygen of the atmosphere, when the two are brought in contact, and thus to inflame or burn, and give out an amount of heat far beyond that of its temperature when it escaped from the furnace. Means were then contrived for conducting and burning these gases in the other furnaces to be heated. This important invention is being introduced in our furnaces, and will produce an important change."

Further on, the writer of the above Report expresses the "opinion that the application of the escaping gases for the refining processes, will enable the iron master to produce, after a little experience, iron of the best quality with the Anthracite."

Carrying out the same principle of this invention, Mr. Detmold has, by his further improvements in the construction and working of furnaces, perfected the application of Anthracite to all the various processes of manufacturing bar iron, to one of the most important of which, viz: the refining process, this fuel had never before been successfully applied; and has effected thereby, at the same time, a most important economy in fuel, as well as in iron. We again resort to the Report of the Patent Office for 1845, for the following notice of this great improvement:—

"In my last Report I alluded to the important results brought about by the use of the gases escaping from smelting and other furnaces, as a fuel by the admixture of these with atmospheric air. A modification of this important invention was patented in the latter part of the year 1842; and as it has since been reduced to successful practice, I deem it important to the iron interests to call public attention to it. The improvement is applicable to all reverberatory furnaces, and is intended to remove defects which have been known to exist ever since the *rationale* of the process was understood. When a fresh charge of coal is put on the grate, a large portion of the heat becomes latent, in gasefying the coal preparatory to its ignition; which gases thus evolved, are mostly combustible, and not being supplied with oxygen, escape from the chimney in an unconsumed state—thus wasting great quantities of fuel; and when the gases have been distilled, and the coal is in an incandescent state on the bars, the blast supplies too much oxygen, which, coming in contact with the iron, oxidizes and wastes it. To remove these difficulties, the fire chamber of reverberatory furnaces is made of such depth as always to have a very thick stratum of coal upon the grate, which fuel is converted into combustible gases by a blast or current of air, forced into a closed ash-pit under the grate; and in combining with this gas-generating chamber and furnace an arrangement of blow-pipes, or other convenient apparatus, through which heated atmospheric air is to be forced, by means of any ordinary blowing machine, into the said gases, for the purpose of effecting their combustion in passing to the chamber of the furnace containing the iron, where the heat is to be applied. In this way, all the gases, instead of escaping as heretofore, are consumed in the immediate neighbourhood of the iron, where the heat is required, and the oxygen of the atmospheric air is not permitted to act injuriously upon the iron whilst heating it."

We learn that this system is already very generally adopted here by the iron masters, and every where with the most favourable results. It is particularly applicable to the use of Anthracite, but may also be employed with equal advantage to bituminous coals; and we learned lately, from an eminent iron master in Baltimore, that Mr. D. is now engaged in experiments for applying his improvement to the use of dried wood, which, if successful, would, in the opinion of that gentleman, be productive of even more important results to the manufacture of iron in the United States, than its application to Anthracite coal.

Several other inventions, relating to the manufacture of iron and steel, have been patented in the United States; but as they have not yet been reduced to practice, we refrain from noticing them until practical experience shall have established their value to the public.

From the London Mining Journal, March 15, 1845.

THE IRON TRADE.

There never was, perhaps, a period, since the manufacture of iron assumed any degree of importance in this country, in which the prospects of long continued prosperity in this great branch of our staple trade, were based on such certain anticipations as at the present moment. The years of high prices and consequent prosperity were 1817, 1818, 1825, and 1836, in which the prices of pig iron were upon an average of £9, £13, and £7 10*s*., respectively; but the uses to which iron was put at those periods, do not appear to have borne out a sufficient cause for the great advance in prices which were then obtained. Until 1836, railways, for which so many thousands of tons are required, were almost unknown in this or any other country, and the many uses to which it is applied, were either little understood or very sparingly adopted. Thus fire proof buildings, and the general introduction of iron into both public edifices, and private houses and mansions, which carry off so large a quantity of our present supply, were little known a few years ago; but the great feature at present is the employment of iron in ship building—that is, constructing both steam and sailing vessels entirely of iron. On a careful examination, the building of iron vessels does not appear to be of a temporary nature, from the following facts which came under the writer's own observation. Seven years ago, four sailing vessels were built for a company trading from an out port to London. Three of them were built of wood, and one was constructed of iron. At the dissolution of the company last year, these vessels were sold —the three wood ones bringing one half their original cost, while the iron one was found to have suffered so little, and to have cost so small a sum in repairs, that she was sold for very nearly the precise sum of her first cost. These facts, among many others of a similar character, give such a character to iron vessels, and are beginning to be so well understood and appreciated, that there is hardly an iron ship building yard in the kingdom that is not fully employed, and where inquiries for iron vessels are not daily being made; and they justify our opinion, that within a few years there will be no vessels constructed of any other material.

Government seems so fully convinced of their superiority over timber frigates that many are now being constructed of iron in London, Liverpool, Birkenhead, and Glasgow, for public service, and the late increase in the navy estimates seems to point out still further additions to our war steam vessels.

The cotton trade, under ordinary circumstances, takes about one-sixth of the iron made in this country annually in machinery, arising from the ordinary wear and tear of steam engines, boilers, new mills, and the substitution of new and improved looms, &c., &c., for the old. But the number of new mills at present in course of erection exceeds any former period, and of course, must increase the average quantity of iron to be consumed in this branch of our trade. Agriculture also requires considerable supplies, which must this year, and for many succeeding ones be greatly increased, from the improvements that are taking place in agricultural machinery.

If to these circumstances be added the extra demands for an increasing population, not only in point of numbers, but in wealth and general prosperity, it must be admitted that a greater amount of iron will be required, both in this and other countries, than has ever yet been known.

It has been urged that high prices of any article will soon have the effect of increasing the production of that commodity. This, in most cases, is true; but it will not fully, and at all events, will not immediately, apply to iron, for the erection of new furnaces, and machinery, the sinking of new coal mines, and the forming of railways to bring the minerals to the point at which they are required, involve so large a quantity of iron, as to render it scarcer for the time. Another cause which tends to diminish the production of iron, while high prices prevail, is the advance of wages to workmen, always incident to prosperous times; for a miner will work six days a week when he earns 2*s*. per day; but only three or four days, when he gets 4*s*. or 5*s*. per day.

The great demand for labour, in the forming of new lines of railway, in tunnelling and embanking, will also draw from the iron districts a large amount of population, which would otherwise have been employed in the kindred branch of mining.

It may be a matter of some interest, in the present state of the iron trade, to attempt to reduce to figures the amount of iron likely to be made and consumed in the present year; and with some labour, assisted by practical men, the following table has been drawn up:—

	Tons.
Pig iron produced in England and Wales in 1844,	856,000
Iron produced in Scotland, 1844,	354,000
Total for Great Britain, 1844,	1,210,000
Add for increase induced for high prices in 1845,	120,000
Total for 1845,	1,330,000

Estimated Consumption for 1845.

2000 miles of railways, to be made in 1845 and 1846—say, half in 1845, contracted for.

	Tons.
1000 miles of railway, 250 tons per mile for rails,	250,000
Add for loss of one-fifth, in converting pig iron to rails,	50,000
1000 miles of railway require, of chairs,	70,000
Add loss in manufacture, 5 per cent.,	3,500
Iron required for railways in progress, and passed in 1844,	150,000
Iron for wagons, stations, engines, tanks, &c., computed from inspection of railway companies' accounts, that each mile of railway requires 300 tons per mile above the weight of permanent rails and chairs—1000 miles will then give,	300,000
Export in 1844, 460,000 tons—say, from the increase of railways abroad, and the remission of duties on iron by some of the Continental States, it will be,	500,000
General consumption of iron in Great Britain, (exclusive of railways,) in bar iron, castings, water and gas pipes, in steam engines, and the whole hardware of the country,	480,000
Total,	1,803,500

If this statement is, in any way, near the truth, we shall have a deficiency of nearly 500,000 tons of iron, which must cause the suspension of many great public works. It is possible, that from the exertions of our iron masters, a greater quantity may be produced than 1,330,000 tons; but it cannot be materially greater than what has been computed.

Under any circumstances, however, it cannot be denied that the iron trade is more prosperous, and that its present flourishing state is not only certain of being permanent for some years, but more likely to increase than at any former period.

VIRGINIA AND NEW ENGLAND

COMPARED.

From the dawn of her existence as a Colony, through every stage of her subsequent progress, as a provincial or independent territory, the State of Virginia has been inhabited by a people devoted to the pursuits of agriculture. When discovered and colonized by Englishmen, the region now comprised in Virginia, and familiarly called " the Ancient Dominion," was one continued, dense, and very partially broken forest. A few savage tribes were found along the tide waters, but the interior was scarcely inhabited, even by savages. The lapse of a few years only was required to cause the feeble Indian inhabitants, after several struggles for existence, to disappear before the European emigrants, who, disappointed in their searches after mines of the precious metals, soon turned their attention to planting as their sole occupation. English capital was not wanting to encourage the early adventurers. Efforts at first were made to introduce the culture of silk and the vine, but these requiring much care and professional knowledge, were unsuited to an infant Colony, although the climate and soil were well adapted to those products. Tobacco, a plant which Virginia was found to yield of a fine quality, soon supplied the desideratum of a resource from whence the friends of the Colony in England could obtain returns for their capital. This article therefore became the great staple commodity of Virginia, forming the principal article of export until the American Revolution. Since that period the planters have turned their attention more to the cultivation of wheat, Indian corn, and other grains, as well as other products of agriculture.

None of the North American Colonies settled by British emigrants, it is believed presented greater advantages to agriculturists than Virginia. It lies between those parallels of latitude which include the finest climate on the old continent—Morocco, Syria, Asia Minor, Greece, Sicily, Naples, and the southern parts of Spain. Mr. Jefferson, in his notes on Virginia, observes, that proceeding on the same parallel of latitude westwardly, the climate becomes colder, till you reach the summit of the Alleghany ridge. Thence descending to the waters of the Mississippi Valley, the temperature increases, and to such an extent that the climate is several degrees warmer in that valley than in the same latitude on the shores of the Atlantic. With regard to the productions of Virginia, Mr. Jefferson says, " It is not easy to say what are the articles either of necessity, comfort, or luxury which we cannot raise, as everything hardier than the olive and as hardy as the fig may be raised here in the open air." Mr. Darby remarks, " that though the soil increases in fertility advancing from the seaboard, still density of population is in a near ratio to proximity to the place of original settlement on James River. If we make every just allowance for the space actually occupied by mountains, and other unproductive tracts, still there would remain 50,000 square miles, at least, capable of sustaining a mean distributive population, equal to any one of the best inhabited of its existing counties, say Henrico, including the city of Richmond. Such a ratio would give Virginia upwards of *five millions of inhabitants*, a number far below the number which it could support." Another writer (Mr. Flint) in describing Virginia, says: "this State is traversed by so many considerable streams, that pursue parallel courses through the level Atlantic belt, and the navigation of these streams has been so much improved by artificial means, that most of the transport of the State is by water, and commerce is in this way brought to the doors of the people. To the productions common to the northern and middle States, this State adds the sweet potato, the finest tobacco, and in the southern parts cotton as a crop. The productions of the north and the south, apples and wheat; cotton and tobacco meet here, as in Tennessee, in the western country. The temperature, soil and circumstances, are supposed to be favorable in the highest degree to the cultivated grape and the silk mulberry. Nature has given the State every advantage of position, climate, and navigable rivers."

A region thus highly favoured by nature, and peopled with a race of farmers and planters principally of Anglo-Saxon descent, it will be admitted, combines the circumstances requisite to test the truth of the political dogma which has been so long prevalent in Virginia, and inculcated by other professed friends of free trade in the United States, namely, that agriculture, unsupported by manufactures, is the best and most profitable employment for the people of this country; that, in the language of Mr. Jefferson, "our workshops should be in Europe." Although that statesman afterwards changed his opinion, and became convinced that it would be best "to place the manufacturer by the side of the agriculturist." The leading politicians of Virginia have adhered to the original doctrine, and in this they are supported by the advocates of free trade generally.

If the notions of this school of political economists be correct, in which, by the way, they agree with all the old English writers on the subject, in asserting that it was for the interest of the mother country to furnish the Colonies with every article of manufacture necessity or luxury might require, while it was best for the Colonies in return to send all their raw materials, from agriculture, the mines, or the forest, to the mother country—then, surely, would Virginia, where the doctrine has been strictly carried out, present an example of substantial prosperity or improvement, which might challenge comparison.

Where then shall we look for a section of the United States, possessing no advantages in priority of time of settlement, in extent of territory, in physical resources, in navigable waters, in climate, in natural position, or governmental protection; and where other industrial pursuits have been mingled with those of agriculture? Fortunately such a territory is found in the six Eastern States, usually called *New England.*

The first settlement in Virginia was commenced in 1607, at Jamestown, while the first Colony planted in New England was a few years afterwards, viz, in 1620, at Plymouth. Both sections may therefore be considered as nearly of the same age in point of settlement, both were settled by Englishmen, and there is a striking similarity in extent of territory. Mr. Martin, a Virginia geographer, states the area of Virginia at 65,624 square miles; Mr. Darby says, "the area of this State is usually underrated, as by a careful measurement by the rhombs, the superfices are within a fraction of 70,000 square miles." (The area of England and Wales is but 57,812; Scotland, 26,016; and Ireland, 31,874 square miles.)

The area of the New England States is thus given by the best authorities, viz:—

	Square miles.	Acres.
Maine,	30,000	19,200,000
New Hampshire,	9,280	5,939,200
Vermont,	10,212	6,535,680
Massachusetts,	7,500	4,800,000
Rhode Island,	1,360	870,400
Connecticut,	4,674	2,991,360
Total,	63,026	40,336,640

It is thus shown that Virginia is superior to New England in extent of territory; the advantage must also be conceded to her in climate, in fertility of soil, in the variety of agricultural productions, in her natural position, in the extent of internal navigation, thus affording avenues to market, with equal facilities for foreign or domestic commerce. It might also be shown that Virginia possesses great advantages for manufacturing, and that in minerals she is superior to any other State. "Few countries," says Martin, "possess greater advantages than Virginia for success in manufacturing; she has labour cheap and abundant, inexhaustible supplies of fuel, and almost unlimited water power." "In minerals and fossils," says Flint, "Virginia is considered the richest State in the Union. Quarries of the most beautiful marble and freestone, blue limestone, pit coal, and iron ore, are found in inexhaustible abundance, and in places too numerous to be designated. Black lead, lead ore, rock crystal, amethysts, and emeralds, are discovered. Porcelain clay and chalk are common, and almost all the useful fossils. The extensive belt of hill and mountainous country, in which gold is found in every form, commences in this State, nearly in the midland regions, and extends S. W. many hundred miles."

We have alluded to these natural resources of Virginia, to show her capabilities of employing a large population in manufacturing and mining, and thus diversify the industrial pursuits of her inhabitants; but it is not here our purpose to point out advantages which it is the policy of Virginia statesmen, of the free trade school, to suffer to remain dormant, and obtain supplies for their own wants from the products of European mines and manufactures—payment being made for the same in such of the products of the soil of Virginia as it may please Europeans to take, and subject to such duties and restrictions as those transatlantic countries may impose.

The early Colonists of New England were favoured with a less genial climate, and generally a less fertile soil, than their brethren of Virginia; but by turning their attention, in addition to agricultural employments, to the fisheries, to traffic, and the fur trade with the Indians, to the lumber and provision trade with the West Indies, in exchange for the produce of those islands, and to domestic manufactures, this diversity of industrial pursuits soon more than compensated for the physical disadvantages under which they labour. Accordingly, we find the population of New England, in 1701, was estimated at120,000, while that of Virginia was but 40,000. In 1749, New England was stated to contain 385,000 souls, and Virginia 85,000. Edmund Burke, in a work published in 1757, estimates the population of Virginia at between 60 and 70,000 whites, and nearly 100,000 slaves.

The physical strength of the Colonies was shown during the Revolution. From 1775 to 1783, inclusive, New England furnished 118,251 Continental soldiers, and 29,334 militia; while Virginia furnished 26,678 Continentals, and 5,620 militia, for the Revolutionary service, during the same period. The sums allowed by the United States for expenditures by the several States, were, to New England, $35,311,340; to Virginia, $19,085,981.

The relative condition of New England and Virginia, at the present time, is shown by the following statements. They present a comparative view of the substantial elements of prosperity, as well as of moral and intellectual improvement, in these two sections of the United States—the one a population of diversified industrial employments, and improving all their advantages—the other a population chiefly agricultural, its manufacturing, mining, and commercial advantages but partially developed, importing from abroad a large proportion of the manufactures necessary for the supply of its inhabitants, and most of which could readily and advantageously be made within its own borders.

Comparative view of the present condition of New England and Virginia.

	New England.	Virginia.
White population in 1840,	2,212,165	740,968
Free coloured, do. do.,	22,633	49,842
Slaves, do.,	23	448,987
Total population in 1840,	2,234,821	1,239,797
Persons employed in Agriculture,	414,138	318,771
do. do. in Manufactures	187,258	54,147
do. do. in Mining,	811	1,995
do. do. in Commerce,	17,757	6,361
do. do. in Navigation,	44,068	3,534
do. do. in Learned Professions,	11,050	3,866
Whites over 20 years of age, who cannot read and write,	13,041	58,787
Students in Colleges,	2,857	1,097
do. in Academies,	43,664	11,083
Scholars in Primary Schools,	574,277	35,331
Capital employed in Manufactures,	$86,824,229	$11,360,861
do. do. in Foreign Commerce,	19,467,793	4,299,500
do. do. in Fisheries,	14,691,294	28,383
do. do. in Lumber business,	2,096,041	113,210
Banking capital in 1840,	62,134,850	3,637,400

Estimates of the Annual Products, by Professor Tucker, of Virginia, on the basis of the Census of 1840.

	New England.	Virginia.
Annual products of Agriculture,	$74,749,889	$59,085,821
do. do. Manufactures,	82,784,185	8,349,211
do. do. Commerce,	13,528,740	5,299,451
do. do. Mining,	3,803,638	3,321,629
do. do. Forests,	3,361,287	617,760
do. do. Fisheries,	9,424,555	95,173
Total annual products,	$187,657,294	$76,769,053

Summary of the Population for fifty years.

	New England.	Virginia.
White population in 1790,	992,781	442.115
Coloured do. 1790,	17,042	306,193
White do. 1800,	1,214,658	514,280
Coloured do. 1800,	18,657	366,920
White do. 1810,	1,451,985	551,534
Coloured do. 1810,	19,906	423,088

	New England.	Virginia.
White population in 1820,	1,637,415	603,074
Coloured do. 1820,	21,393	462,292
White do. 1830,	1,933,338	694,300
Coloured do. 1830,	21,378	517,105
White do. 1840,	2,212,165	740,968
Coloured do. 1840,	22,657	498,829
Increase of whites in fifty years,	1,219,384	298,853
Increase of coloured persons in fifty years,	5,613	192,636
Increase of total population,	1,224,997	491,489

The per centage of increase on the total population in fifty years, in New England, is 121 3-10—in Virginia, 65 6-10.

The emigration from New England, for the last fifty years, is estimated to have greatly exceeded in proportion that of Virginia.

HISTORICAL FACTS ILLUSTRATING THE ABOVE COMPARATIVE VIEW.

From Salmon's "Present State of Virginia," London, 1738.

Nor do the Virginians (says Colonel Beverley in 1722) apply themselves to build merchant ships, though several are built by others in their country. Their only foreign trade worth mentioning is that to England, and that indeed is very great and very profitable to England, but not so to themselves, the merchants beating down the price of their tobacco to little or nothing.

They had also a trade to the Leeward Islands, whither they sent lumber, corn, and provisions, for which they took rum, sugar, and molasses in return; but New England, New York, and Carolina, have in a manner beaten them out of that branch of business.

All sorts of naval stores are produced here, but these and a thousand other advantages which the country naturally affords, says the Colonel, the inhabitants make no use of; they see their naval stores daily enrich the English, who send hither to build ships, while they, instead of promoting such undertakings among themselves, discourage them.

By reason of the unfortunate method of the settlement, and want of concentration, they cannot make a beneficial use of their *Flax*, *Hemp*, *Silk*, *Silk Grass*, and *Wool*, which might otherwise supply their necessities. Thus they depend altogether upon the liberality of nature, without endeavoring to improve its gifts by art or industry.

As to the roads, there are nowhere better, the country being for the most part level, and scarce any ragged or deep ways, insomuch that it is a common thing to ride forty or fifty miles in an afternoon. (This alludes to the tide water country, the part of Virginia then settled.)

When the fruitfulness of Virginia was known, and the dangers incident to an infant settlement were over, people in good circumstances went over thither with their families, either to improve their estates, or to avoid persecution at home. And particularly in the time of the rebellion several good Cavalier families retired thither, as those of the other side did upon the restoration of King Charles the Second. But Virginia had but few of the latter, having distinguished herself by her loyalty in adhering to the Royal family after all other people had submitted to the usurpation. The Roundheads, for the most part, therefore went to New England.

From Edmund Burke's "European Settlements in America, 1757."

From us the Virginians take every article for convenience or ornament which they use; their own manufacture does not deserve to be mentioned. The planters have no prospect of ever bettering their condition; and they are the less able to endure it as they live in general luxuriously, and to the full extent of their fortunes. Therefore any failure in the sale of their goods (tobacco) brings them heavily in debt to the merchants in London, who get mortgages on their estates, which are consumed to the bone, with the canker of an eight per cent. usury. But however the planters may complain of the tobacco trade, the revenue flourishes by it, for it draws near £300,000 a year from this one article only; and the exported tobacco, the far greater profits of which come to the English merchant, brings almost as great a sum annually into the kingdom.

From the "British Empire in America," London, 1773.

Tobacco is the staple commodity of the country (Virginia) beneficial to the planter and natural to the soil. The trade of this province consists generally in that article, which is brought to such perfection as to command a large traffic, not only in England, but even in all parts of the world. Immense are the sums acquired by the tobacco trade, both to the Colony and the mother country. The whole trade in tobacco is one of the most profitable of all the British commerce, as it employs about 200 sail of ships every year, and generally brings in between £300,000 and £400,000 to the Royal treasury annually. Of this commodity 30,000 hogsheads have been exported annually.

Beside the great advantage that accrues to the national stock, by the exportation o tobacco from England, it should be considered how beneficial this trade is, by the prodigious number of hands it employs, and families it maintains, as well in Great Britain as Virginia. Great quantities of manufactures are exported from the mother country to the Colony, whose merchants and planters export tobacco, cattle, and provisions to the West India Islands, from whence they bring in exchange, molasses, sugar and rum.

The country is certainly capable of large improvements by the timber trade and its appurtenances, as pitch, tar and rosin. They might also manufacture flax, hemp, cotton, and even silk; but their want of towns prevents them from receiving many advantages by the fertility of the soil.

From Jefferson's Notes on Virginia.

Before the present (Revolutionary) war we exported (*communibus annis*) (one year with another) according to the best information I can get, nearly as follows:

Tobacco,	55,000 hhds. (of 1000 lbs. each,)	$1,650,000
Wheat,	800,000 bushels,	666,667
Indian Corn,	600,000 do.	200,000
Shipping,		100,000
Masts, planks, scantling, shingles, and staves,		66,666
Tar, pitch and turpentine,	30,000 bbls	40,000
Peltry,		42,000
Pork,	4,000 bbls	40,000
Flax seed, hemp and cotton,		8,000
Pit coal, and pig iron,		6,667
Peas,	5,000 bushels,	3,333
Beef,	1,000 bbls	3,333
Sturgeon, white shad, herring,		3,333
Brandy, from peaches, apples, and whiskey,		1,667
Horses,		1,667
Total,		$2,833,333

We never had any interior trade of any importance. Our exterior commerce has suffered very much from the beginning of the present contest (the Revolutionaty war). During this time we have manufactured within our families the most necessary articles of clothing. Such is our attachment to agriculture, and such our preference for foreign manufactures, that, be it wise or unwise, our people will certainly return as soon as they can, to the raising raw materials, and exchanging them for finer manufactures than they are able to execute themselves. For the general operations of manufacture let our workshops remain in Europe.

From Edmund Burke's "European Settlements in America," 1757.

NEW ENGLAND.

The country which we call New England, is in length something less than 300 miles; at the broadest part, it is about 200, if we carry it on to those tracts which are possessed by the French; but if we regard the part we have settled, in general it does not extend any where much above sixty miles from the sea coast.

The soil of New England is various, but best as you approach the southward. It affords excellent meadows in the low grounds, and very good pasture almost every where. The country is not very favourable to any of the European kinds of grain. The wheat is subject to be blasted, the barley is an hungry grain, and the oats are lean and chaffy. But the Indian corn, which makes the general food of the lowest sort of people, flourishes here. They raise in New England, besides this and other species of grain, a large quantity of flax, and have made essays upon hemp.

Their horned cattle are very numerous, and some of them very large. Hogs likewise are numerous, and particularly excellent. They have, besides, a breed of small horses, which are extremely hardy. They have a great number of sheep, too, and of a good kind. The wool is of a staple sufficiently long, but it is not near so fine as that of England. However, they manufacture a great deal of it very successfully. I have seen cloths made there, which were of as close and firm a contexture, though not so fine, as our best drabs; they were thick, and, as far as I could judge, superior for the ordinary wear of country people, to any thing we make in England.

There is not one of our settlements which can be compared, in the abundance of people, the number of considerable and trading towns, and the manufactures that are carried on in them, to New England. It is judged that the four provinces which it comprises, contain about 350,000 souls, including a very small number of blacks and Indians; the rest are whites. Douglass, who seems to be well informed on this point, proportions them as follows:—

Massachusetts Bay,	200,000
Connecticut,	100,000
Rhode Island,	30,000
New Hampshire,	24,000
	354,000

The most populous and flourishing parts of the mother country, hardly make a better appearance. Our provinces to the southward on this Continent, are recommendable for the generous warmth of the climate, and a luxuriance of soil, which naturally throws up a vast variety of beautiful and rich vegetable productions; but New England is the first in America, for cultivation, for the number of people, and for the order which results from both.

There are in all the provinces of New England large towns, which drive a considerable trade. Boston, the capital of Massachusetts Bay, is the first city of New England, and of all North America; it contains at least 20,000 inhabitants.

That we may be enabled to form some judgment of the wealth of this city, we must observe that from Christmas, 1747, to Christmas, 1748, five hundred vessels cleared out from this port only, for a foreign trade, and 430 were entered inwards; to say nothing of coasting and fishing vessels, both of which are extremely numerous, and said to be equal in number to the others. Indeed the trade of New England is great, as it supplies a large quantity of goods from within itself; but it is yet greater, as the people of this country are, in a manner, the carriers for all the Colonies of North America and the West Indies, and even for some parts of Europe. They may be considered, in this respect, as the Dutch of America.

The commodities which this country yields, are principally masts and yards, for which they contract largely with the royal navy; staves, lumber, all sorts of provisions, beef, pork, butter, and cheese, in large quantities; horses and live cattle; Indian corn and peas; cider, apples, hemp, and flax. Their peltry trade is not very considerable. They have a noble cod fishery upon their coast, which employs a vast number of their people; they are enabled by this to export annually above 32,000 quintals of codfish to Spain, Italy, and the Mediterranean, and about 19,000 quintals to the West Indies. The quantity of spirits which they distil in Boston from the molasses they bring in from the West Indies, is as surprising as the cheap rate at which they vend it, which is under two shillings (sterling) a gallon.

They are almost the only one of our Colonies which have much of the woollen and linen manufactures. Of the former, they have nearly as much as suffices for their own clothing. A number of Presbyterians from the North of Ireland chose New England as their place of refuge. Those people brought with them their skill in the linen manufactures, and meeting with very large encouragement, they exercised it to the great advantage of this Colony. At present they make large quantities, and of a very good kind. Hats are made in New England, which, in a *clandestine* way, find a good vent in all the other Colonies. The setting up of these manufactures has been, in a great measure, a matter necessary to them. The same necessity, together with their convenience for building and manning ships, has made them the carriers for the other Colonies.

As the people of New England have no commodity to return for the value of above a hundred thousand pounds sterling, which they take in various sorts of goods from England, but some naval stores, and these in no great quantities, they are obliged to keep the balance somewhat even by a circuitous commerce, which, though not carried on with Great Britain, nor with British vessels, yet centres in its profits, where all the money which the Colonies can make in any manner, must centre at last.

INDUSTRIAL PURSUITS

IN THE VALLEY OF THE BLACKSTONE, NEW ENGLAND.

We ask attention to the annexed statement of facts, which we extract from a Report of a Committee appointed to collect information in relation to the business and travel on a contemplated line of rail roads, between Providence, R. I., and Worcester, Massachusetts.

The population of the towns through which it will pass, including Providence and Worcester, was, according to the census of 1840, as follows, viz:

Providence,	23,171
North Providence,	4,207
Smithfield,	9,554
Cumberland,	5,255
Mendon,	3,524
Uxbridge,	2,004
Northbridge,	1,449
Sutton,	2,370
Grafton,	2,943
Millbury,	2,171
Worcester,	7,497
Making an aggregate of	64,115
To which should be added Pawtucket,	2,184
Milford,	1,773
Douglas,	1,617
Upton,	1,466
	71,155

At this time probably 82,000 inhabitants.

The business of Worcester is very large; besides the trade usual for the supply of its ordinary population there are extensive manufacturing establishments, using coal and iron, and producing rail road cars, machinery, farming utensils, shoes, and various other articles. Among them are the following:

A paper maker employs fourteen hands, pays freight on more than four hundred tons of merchandize, and ships to New York one hundred tons annually.

A manufacturer, employing thirty-five hands, uses two hundred tons of iron, and makes four thousand ploughs, and other agricultural instruments, annually.

A manufacturer of card wire employs forty men, and purchases one hundred tons of iron annually.

A lead pipe maker uses fifty tons of lead annually.

A manufacturer of woollen machinery uses about two hundred tons of iron annually, and makes thirty-five sets of machines.

Thirteen establishments for the manufacture of machinery, use large quantities of iron, lumber, and coal.

The business of one is about, annually, - - - -	$65,000
“ “ “ “ “ - - - -	50,000
“ “ “ “ “ - - - -	20,000
“ “ “ “ “ - - - -	16,000
	$151,000

And that of the others in the aggregate very large.

A large foundry employs about one hundred and twenty hands, and uses about twenty-one hundred tons of coal, and large quantities of iron and moulding sand.

A paper and calico machine manufactory, occupied by several concerns, makes about the value of $200,000 of these machines annually.

Over and above the cotton and woollen mills, the scythe manufacture, and the machine shops, enumerated in the annexed table, there are in the under-mentioned places the following manufactories all in successful operation :—

In Worcester,	3 woollen mills, with 9 sets of machinery.
“	2 cotton mills, with 1,500 spindles.
Leicester,	3 woollen mills, 8 sets of machinery.
Auburn,	1 cotton mill, 2,000 spindles.
Weldon,	2 woollen mills, 4 sets of machinery.
“	4 cotton mills, 8,000 spindles.
West Boylston,	4 “ “ 9,000 “

An iron dealer in Worcester purchases annually 200 tons of iron.

The sales of shoes, exclusive of those at retail, amount annually to about $572,000.

About 120,000 bushels of southern corn, 4,000 tons of coal, 50,000 bushels of salt, and 1,000 tons of lime, are consumed annually.

In Pawtucket, the Franklin Print Works print 160,000 yards per week. There are also in this village, a manufactory of plane irons and augurs, two foundries, a planing mill, a reed maker's shop, a lock and knob shop, a comb factory, a sash and blind factory, three curriers' shops, a sheet iron and tin shop, a dyeing establishment, two shops for engraving copper rollers for printing cottons, three printing offices, and a large trading interest.

In Central Falls—Four thread mills, making 1,200 lbs. per week, employing 284 females, and 240 males. There are also two spooling shops, two turning shops, and one bedstead manufactory. Home Print Works employs eight females and seventy-five males, and prints 80,000 pieces of cloth per annum.

Lonsdale has a bleaching and dyeing establishment just ready to go into operation.

Lime Rock, in Smithfield, produces very large quantities of lime, of very superior quality, which is sent to Providence for shipment, and is preferred to any other lime made in New England.

Cumberland Hill is in the immediate vicinity of an inexhaustible quarry of iron stone, which is extensively shipped and used in Massachusetts and other places, in the manufacture of iron.

Woonsocket has an iron foundry, two grist mills, a saw mill, two thread mills, a spool and bobbin shop, and soap works.

Rogerson's Village has a saw mill, a batting mill, and two stove manufactories.

Whitingville is in Northville, in which town the shoe manufacturers and curriers employ 120 males and 80 females, and make about 100,000 pairs of shoes per annum.

Douglas has a large manufactory of axes, employing 77 hands; two shoe manufactories, employing 86 males, 65 females—making 38,000 pairs of shoes per annum.

Grafton.—The shoe business of this place is much larger than that of any other on the route, as will appear on comparing the number of persons employed—about 200 females and 400 males.

New England Village.—This village has a batting mill, a grist mill, a sash factory, a hoe and scythe factory, and a tin and stove shop.

Wilkinsville has two shuttle shops, a machine shop for joiner's tools, a machine shop for shoemaker's tools, and two shoe manufactories, making 20,000 pair of shoes annually.

Millbury has a paper mill, an armory for making small arms, an iron foundry, two manufactories for making farmer's tools, and three shoe manufactories, whose joint business amounts to $150,000 per annum.

☞ All these are over and above what are inserted in the annexed table.

We find also, in this report, the following comparison between the Blackstone Valley and Lowell, which shows that this region, through which the above rail road will pass, nearly equals Lowell in its industrial pursuits.

	Lowell.		Blackstone.
Cotton spindles,,	178,868		307,006
Cotton used,	21,424,000	lbs. per annum.	15,812,000
Do. Cloth made,	65,803,400	per week.	62,285,600
Wool manufactured,	not known		3,341,700
Hands employed,	9,092		9,298

The estimated number of passengers per the Lowell Rail Road, was originally 37,440 per annum. The actual number, exclusive of those to and from the Concord, Nashua, and Maine Roads, has for several years past varied from 90,000 to 120,000, and will probably this year reach 140,000.

The Lowell Rail Road divides 8 per cent. annually on $1,800,000, and the Committee for the Providence and Worcester Road think it reasonable to estimate that this Road will divide an equal profit on $1,000,000, the cost at which it can be made.

We understand the stock has been all taken up; and further, that a Company has been recently incorporated to construct a Rail Road from Worcester to Nashua, New Hampshire, which town communicates with Lowell by a rail road of 15 miles in length.

The above account of the industry of the several towns, not included in the annexed table, is given in a manner to render it impossible to state, with any tolerable degree of accuracy, the results in dollars and cents. It presents, however, a picture, which can be well understood, and shows, as we promised to show, a portion of "the busy, bustling mass of our citizens at their daily employment."

TABULAR STATEMENT OF MANUFACTURING ESTABLISHMENTS ON THE SURVEYED ROUTE OF THE PROVIDENCE AND WORCESTER RAIL ROAD

	Population.	Cotton Mills.	Cotton Spindles.	Looms.	Yards of Cloth per week.	Bales of Cotton per ann.	Woollen Mills.	Sets of Machinery.	Yds. Wool Cloth per week.	Pounds of Wool per annum.	Machine Shops.	Scythe Works.	Doz. of Scythes per ann.	Fe'ales employed	Males employed
Pawtucket,	5,548	15	35,920	694	90,100	3,071					7			431	1,043
Central Falls,	1,307	7	19,714	425	85,000	1,875					3			284	240
Valley Falls,		5	22,340	627	101,970	2,548					3			276	205
Home Print Works,	1,500													8	75
Lonsdale,	1,200	4	22,000	560	60,000	1,200					1			250	150
Albion,	400	2	8,500	206	20,000	600					1			115	102
Mannville,	700	2	12,000	300	30,000	850								80	150
Mansfield & Holman, & B.,	150	1	800	12	2,000	100	1	1	1,500	25,000		1	5,000	15	60
Hamlet,	250	2	5,832	120	20,000	650								67	74
Bernon,	750	3	11,000	288	38,500	1,000								175	75
Woonsocket,	4,000	17	34,456	812	151,030	4,251	3	10	4,700	281,500	6			413	456
Waterford,	800						3	26	8,000	900,000				125	325
Blackstone,	1,100	3	36,000	750	150,000	3,000					1			350	200
Slatersville,	1,200	4	12,000	305	55,000	2,400					1			212	108
Millville,	600	2	1,400	16	3,000	150	2	6	4,000	200,000		1	2,000	100	100
Iron Stone,	90						1	1	1,000	30,000				15	24
Uxbridge,	2,000						5	17	12,000	624,000	1			71	115
Rogerson's,	400	2	8,200	144	18,000	550								120	80
Whitingville,	500	2	11,400	240	70,000	2,000					1			130	215
Douglass,	1,800	2	7,660	196	23,000	750	1	1	1,800	51,200				65	100
Manchaug,	200	3	5,000	132	20,000	450								45	75
Holbrook's Village,	550	3	11,600	280	50,600	2,100					1			40	120
Farnumsville,	375	1	4,000	104	20,000	800								50	25
Fisher's Mill,	125	1	2,600	60	13,000	500								22	25
Grafton,	2,877	1	1,300	31	7,000	200								200	400
Saundersville,	200	2	2,300	35	10,000	225								15	25
Sutton, (Wilkinsonville,)	2,370	2	6,184	100	16,000	400	1	2	2,800	60,000	1			56	94
N. E. Village,		2	8,800	250	45,000	2,400					1	1	500	200	100
Millbury,	2,500	6	16,000	405	96,600	3,008	5	17	15,100	1,170,000	2	1	3,000	328	444
Total,	33,652	94	307,006	7.092	1,197,800	35,138	22	81	50,900	3,341,700	30	4	10,500	4,258	5,205

We hope it will not be very long before we shall be enabled, through a close examination, to give a more methodical account. Meantime we take from the table accompanying the report, its most important statements, and give the following approximate results:

Cost of clothing 9463 persons at $30 per annum,	$283,890
Cost of Feeding, $100 do	946,300
	$1,230,190
Cost of cotton manufactured, 35,138 bales of 400 lbs. each at 6¼ cents, $25,	$878,450
Add food as above,	946,300
	$1,824,750
3,341,700 lbs. of wool at an average of 25 cents,	835,425
Product of agriculture and planting consumed,	$2,660,175
We cannot estimate the amount of iron, having only a partial account of it. The account given, however, is of 500 tons used per. annum, and this must be fine bar iron, and it is fair to value it at $100 per ton, is	$50,000
2,100 tons of coal at $6	12,600
Productions of the mines annually used,	$62,600

It would be very desirable to have a complete and accurate account of the quantity and value of all the articles, domestic and foreign, that are used by this population of 71,155, all of whom derive their income from the industry we have shown to prevail in the district they occupy, and we confidently believe, that in the progress of our labour we shall obtain information which will enable us to give a very near approximation to it.

But although we have not been enabled to give the amount in the manner and form we could have wished, can any one examine the statement without seeing in the clearest manner how the interest of agriculture, manufactures, and commerce, is involved in it? The transportation of the raw materials and merchandize, what is this but internal commerce? amounting per estimate in the table to $156,338, to which might be added $57,144, for the conveyance of passengers, making $213,482. And who can doubt that this population consumes a vast many foreign articles beyond what would be consumed by the same number of persons employed in agricultural pursuits.

We think these facts speak a language not to be misunderstood, and for ourselves can hardly conceive of an individual so blind to the true interests of his country, as to wish, by the admission of foreign labour, depressed as it is by the oppressive systems and governments of Europe, to glut our markets, with fabrics from our own raw materials, and thus break in upon the happy scene we have been describing, which is but a miniature picture, in one of our smallest States, of what is going on in the manufacturing branch of industry, all over the Union, which, according to the census, yields to the country an annual product, over and above the value of the raw material, of $239,836,224, and gives useful occupation to 791,749 persons, who but for the proper encouragement given to the various industrious pursuits we have portrayed, must either remain idle or be thrown upon agricultural employments, to swell the amount of products for which there would be no market.

THOUGHTS,

HISTORICAL, EXPLANATORY, AND SUGGESTIVE, ON THE SUBJECT OF ELECTRO-MAGNETIC TELEGRAPHS.

THE growing importance of the ELECTRO-MAGNETIC SYSTEM OF TELEGRAPHS to the interests both of the commercial and social world, demands at the hands of all reflecting men serious consideration. From what has been done with it, and is still being done with it, upon another continent, and from what is in progress with it here, among ourselves, we are admonished not to slumber over it, nor suffer the public mind to be longer indifferent towards it, or uninformed of its history, its advancement, and the controlling influence it is destined to exert in shaping the social and business relations of all classes of people. From being the most mysterious and terrific of all elements, electricity, under the modified form of galvanism, has become equally subservient with wind, water, and steam, to the daily purposes of human enterprise, without losing at all its potential superiority of motion over all other discovered elements, if element it can be called. Even light itself is not certainly more rapid in its transit through space. "By two independent astronomical phenomena," says an intelligent writer, "namely—the aberration of light and the retardation of the eclipses of Jupiter's satellites, it is alike established that the electric current travels, in round numbers, at the rate of 192,000 miles *per second*. Mr. Wheatstone says, that he has discovered the velocity of electricity to be still greater, and gives, as his conclusion, that it goes at the rate of 197,000 * miles per second."

Now when we inform our readers, that there is a people on our globe, who have so far advanced in the scale of conveniences and enterprise as to be now in the daily employment of intercommunication with each other, through tens and even hundreds of miles, at this almost incomprehensible rate of despatch, so that one sends an inquiry to another one hundred miles distance, and receives a direct, intelligible answer within the same breath, as it were, or, as if the intervening distance were not greater than the width of Broadway, it will doubtless strike them as a startling piece of intelligence, and perhaps lead them to inquire how is it that we, too, in this land of enterprise and speculation, impatience and *go-aheadity*, are without similar facilities?

Cannot our people make as good lightning as the family of John Bull? Or is it that we are still too much *in the raw* to take advantage of the mysticisms and involutions of science, to further our longings for happiness, and our toils for wealth? But if our inquiring countrymen will look into almost any of the great business newspapers that come over to us from the "nation of workshops," they will find it there announced, that the Electric Telegraph of Messrs. COOKE and WHEATSTONE has been adopted, and is in daily use, in all of the following lines, viz: By order of the Lords of Admiralty, in the Southwestern Railway, as a Government Telegraph from the Admiralty, Whitehall, to Portsmouth—a distance of *ninety miles ;* also on a branch line to Gosport, a distance of *fifteen miles ;*—also on the London and Blackwall Railway ;—also from London to Slough, a distance of *eighteen miles ;*—also from Yarmouth to Norwich, *twenty miles ;*—from Tunbridge to Stoneham, *fifteen miles ;*—on a portion of Oldham Railway ;—on a portion of Leeds and Manchester railway ;—on a section of Edinburgh and Glasgow railway ;—on the Dublin and Kingston railway, and from Northampton to Peterborough—a distance of *forty-seven miles.* Other lines are being constructed in various directions, all in the most noiseless and unostentatious manner; so that for any and all the purposes of either peace or war, the British nation are becoming as one individual, in respect to the means and opportunities of instantaneous intelligence and intercommunication; and their whole island, and its immediate dependencies, can give and receive advices of every interesting emergency, and from their centre to their circumference, sooner than our people can cross the ferry *from Courtland street to Jersey City!* And yet, we are really persuading ourselves that we, Americans, are the most enterprising, circumventing, far-seeing, far-reaching, and quick-moving people in the wide world! We are rapid, it is true, in some matters; but they are very apt to be matters of very little moment. Probably in eating a dinner, or shingling a house, and in manufacturing " litttle notions" to order, we are as hard to be beat as any people; and, in conducting an election we can exhibit as much spirit, and run as near to treason and revolution, as any other people that ever lived. But, for constructing a gigantic fleet of packet ships and steamers, with perfect adaptation to the daily wants of a peaceful commerce, and yet combining every essential for an instantaneous conversion of them into formidable ships of war, at the command of government, should the emergency arise; or, for constructing rail roads that cost from $60,000 to $100,000, and even at half a million of dollars per mile, and rendering them productive at that great outlay; or, to seize hold at once the mighty energies which science is constantly divulging, without hesitating for the trials of others, where the mind's eye has sufficiently followed a principle to its natural result—we must, in spite of the struggles of pride, and self-exaltation, acknowledge the inhabitants of our father-land to be much our betters, and altogether in advance of our enterprise.

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* His experiments, as published in Philosophical Transactions of 1834, p. 589, makes the velocity of the electric current 288,000 miles per second, considerably greater than that of light.

But it is not so in thought—not so in conception of great things—it is only so in practice, only so in the execution. Even in the uses of electricity and galvanism for telegraphic purposes, our country, to say the least, can boast of having contributed, and in good season, too, its full quota of suggestion and invention. Was it not *our* FRANKLIN that instructed Europe, and the world, in the most that was known in the last century on the subject of electricity—its peculiar nature—its eccentric laws—its wonderful forces? Although at first—not then wholly repudiating the Jewish prejudice, that nothing good could come out of Nazareth—they refused to print, or even read, *his* productions! And was it not another American philosopher, who earliest told how, and predicted with the certainty and confidence of an inspired prophet, that the galvanic current would in time become the agent of communicating "words, sentences, or figures, from one station to another," and, in time of war, become the great element of the nation's security and defence!

It is both amusing and instructive to trace with what exactitude the great physical and scientific agents of human advancement have been long foreseen and comprehended by philosophic minds, and often in almost the precise relations which they occupy in after time in the great structure of interests that impart, if they do not indeed make, of themselves, the sum of character in human-life. The great truths that are thus seen, fall lifeless, as it were, at the moment of their conception, from the total absence of sympathy and comprehension on the part of the world, to uphold and improve them, then. But, after the lapse of years, perhaps of ages, and even centuries, the moral endowments of mankind appear to grow up, at a leap, to a just perception of them, and they of a sudden shoot up all around in the vigour of a new creation, and become the subjects of universal interest and investigation! The curious and ingenious, the philosophic and the learned, start forth in sudden rivalry to possess and improve the newly-developed advantages, and each to secure to himself the renown of a first discovery! Hence, though it had been an oft-mooted point before, that a western continent existed, years afterwards it became a matter of dispute which of two bold navigators was entitled to the glory of its first discovery. And although one of these carries the judgment of his generation's posterity in his favour, the other so far succeeded in the favourable opinions of that generation itself, as to cause the new continent to receive his own name, which to this day remains unchanged. So, although years anterior to both Watt and Fulton the great idea of condensing steam into a motive power was struck out for the genius of inventors to improve, it lay passive until almost simultaneously upon different continents it sprang into action, with the fresh impulse and appearance of an original discovery, or new thought, and, through WATT and FULTON, the world became at once profoundly engaged in adapting it to the practical purposes of life.

A similar feature presents itself in the history of electric telegraphs. In September, 1837, the editor of the London Mechanic's Magazine remarked as follows:

"The idea of electric telegraphs appears to have spread with electric rapidity. The invention has almost simultaneously made its appearance at four different places, at such a distance from each other, that it must apparently have been invented four times over, as it would otherwise almost require the electric telegraph itself to have conveyed it quick enough. At Frankfort on the Maine, at Paris, at Edinburgh, and at Munich, the discovery is being prosecuted with interest and ardour; and the Germans already claim to have invented a method which will only require one-tenth of the expense of the Scotch one, but have not yet made public what it is."

In this same month of September, when the above announcement was made of the sudden rivalry that had sprung up in different parts of Europe, among the learned and ingenious, Professor MORSE, of New York, wrote a letter to the Secretary of the Treasury, in which is announced (September 27th, 1837,) that he, too, was contemplating the establishment of an electro-magnetic telegraph. He declares that the thought of such a work had five years previously presented itself to his mind, suggested by consultation on the subject with another,* and he then *planned* a system of signs, and an apparatus to carry it into effect. But he says he did not carry out and *test* what he had planned until a few weeks previous thereto; that is, to September 27th, 1837. Hence, it seems, that however minutely or accurately different minds had conceived the idea, or mode of adapting the electric or galvanic current to telegraphic purposes, from some curious law that governs the unseen, but not unfelt moral impulses of the world, the start was taken only in 1837, quite simultaneously in different parts of the world, to test the feasibility of the thought, and to reduce it to practice; and had the London editor of the Magazine kept as close an observation of what was passing on this side of the Atlantic, as he did of events in Europe, he would soon after his above cited article have added American genius among the rivals for glory in the consummation of this great idea.

But to place Professor MORSE in his proper position as to dates, it will be well to give his own account of his first and succeeding thoughts on this subject. In his above-named letter to the Secretary (September 27th, 1837,) he says:

"About five years ago, on my voyage home from Europe, the electrical experiments of Franklin, upon a wire some four miles in length, was casually recalled to my mind in a conversation with one of the passengers, in which experiment it was ascertained that the electricity travelled through the whole circuit in a time not appreciable, but apparently instantaneous. It *immediately occurred to me, that if the presence of electricity could be made* VISIBLE *in any desired part of this circuit, it would not be difficult to construct a* SYSTEM OF SIGNS, *by which intelligence could be instantaneously transmitted.* The thought thus conceived took strong hold of my mind in the leisure which the voyage afforded, and I planned a system of signs and an apparatus to carry it into effect. I cast species of type, which I had devised for this purpose, the first week after my reaching home; and although the rest of the machinery was planned, yet, from the pressure of unavoidable duties, I was compelled to postpone my experiments, and was not able to test the whole plan until within a few weeks. The result has realized my most sanguine expectations."

The exhibition made by Professor MORSE in Washington, in the early part of 1838, was his plan of regulating his signs for letters by metallic types that controlled the frequency and duration of the breaking and closing of the galvanic current. But in the preceding October he published a somewhat precise description of the apparatus, in Professor Silliman's Journal.

In further elucidation of the sort of galvanic impulse by which the progress of the arts and sciences are impelled forward periodically, first laying dormant for years, and almost centuries, throughout the world, and then starting forward simultaneously, with a seeming spirit of rivalry, as widely diffused, we may here add to the records we have already given of what was going on in the summer and fall of 1837, at different points, in Europe and in the United States, in the telegraphic art, the following article, which appeared in the Scotsman, (an Edinburgh paper, we believe,) in August, 1837. The writer, after describing a mode there divulged of constructing an electric telegraph, with items of cost, and "by laying as many wires separated from each other, as will correspond to the letters of the Alphabet," proceeds to comment thus upon the productiveness of a line between London and Edinburgh:—

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* We understand that Dr. Jackson, who was a fellow passenger from Europe in 1832 with Professor Morse, claims the credit of imparting to the latter the first ideas on this subject. It is probably to him that Professor Morse refers.

"As to the working of the telegraph, it is apprehended, that even if the speed of writing were not attained, there could, at least, be no difficulty in indicating one letter per second; at this rate, a communication which would contain sixty-five words, would occupy about five minutes. This is supposing the words to be all indicated. But abbreviation in this, and many other respects, would no doubt be contrived; and the number of words in the communication supposed, are greater than necessary for an ordinary banking or commercial letter, or for friendly inquiries and responses. Supposing, however, that each communication was to occupy five minutes, and to be charged five shillings each, if this telegraph was worked twelve hours a day, (that is, six hours from each end,) it would produce a revenue of £36 daily, or £10,800 per annum, supposing there were three hundred working days in a year. If, however, the plan is practicable, the public intelligence that would, no doubt, be transmitted by the telegraph, would be sufficient to keep it in operation night and day."

On comparing the above with the plan submitted by Professor MORSE to the Secretary of the Treasury, it is found manifestly behind the latter, inasmuch as his required only a single circuit of wire to communicate the entire Alphabet, with all its combinations, into words and sentences. Moreover, his effected actually written communications, while it is not apparent that the Scotch invention contemplated more than visual signs, made by the deflections of needles.

But Professor STEINHEIL, of the University at Munich, in a most interesting article, translated from the German, and re-published in Sturgeon's (London) Annals of Electricity for March and April, 1839, says, the merit of having *actually* constructed the first simplified galvanic-magnetic telegraph, is due to Gauss and Weber. This was as early as in 1833, and a publication of it made in 1834. Steinheil goes on to say:—

"It was Gauss who first employed the excitement of induction, and who demonstrated that the appropriate combination of a limited number of signs is all that is required for the transmission of communications. Weber's discovery, that a copper wire, 7,460 feet long, which he had led across the houses and steeples at Gottingen, from the Observatory to the cabinet of Natural Philosophy, required no special insulation, was one of great importance. The principle was thereby at once established, of bringing the galvanic telegraph to the most convenient form. All that was required, was an appropriate method of inducting or exciting the current, with the power of changing its direction without having recourse to any special contrivances for that purpose. In accordance with the principles we have laid down, all that was required, in addition to this, was to render the signals audible—a task that presented no very particular difficulty, inasmuch as in the very scheme itself, a mechanical motion, namely, the deflection of a magnetic bar, was given. All that we had to do, therefore, was to contrive that this motion should be made available for striking bells, or for making indelible dots. This falls within the province of mechanics, and there are, therefore, more ways than one of solving the problem." The same article goes on to suggest, in respect to the mechanical structure of the telegraph, as follows:—"Should it be desired that the indicator, instead of producing sounds, should write, it is merely required to adapt to one end of the little magnetic bar a small vessel, filled with a black colour, and terminating in a capillary tube. This tube, instead of striking on a bell, thus makes a black spot upon some flat surface held in front of it. If these spots are to compose writing, the surface upon which they are printed must keep moving on in front of the indicator, with a uniform velocity; and this is easily brought about by means of an endless strip of paper, which is rolled off one cylinder on to another, by clockwork. This," he continues, "is, in a general way, the construction followed in the telegraph erected here," &c.

But the same writer says—"As long ago as in 1807, Sommering erected in the apartments of the Academy of Sciences, at Munich, a galvanic telegraph, of which, in 1809, an account was published." It was by the employment of the voltaic pile to bring about the decomposition of water, by means of thirty-five gold pins immersed in an oblong glass trough, each of these pins being marked with a letter or number, and admitting of connexion with the pile by an isolated wire. The ascension of the air bubbles of the water decomposed, was to serve as the telegraphic signal." So as early as in 1819 and '20, Oersted, and Fechner, and Amperes, gave out schemes for the construction of electric telegraphs. And, as before hinted, our own land shadowed forth prophetically, by JOHN REDMAN COXE, of Philadelphia, the following distinctive idea on the subject, which was published as early as in February, 1816, in Thompson's Philosophical Transactions, vol. 7, p. 162, 1st series:—

"I have," says he, speaking of the galvanic current, "contemplated this important agent, as a probable means of establishing telegraphic communications, with as much rapidity, and, perhaps, LESS EXPENSE, than any hitherto employed. I do not know how far experiment has determined galvanic action to be communicated by means of wires; but there is no reason to suppose it confined, as to limits, certainly not as to time. Now by means of apparatus, fixed at certain distances, as telegraphic stations, by tubes for the decomposition of water, and of metallic salts, &c., regularly ranged, such a key might be adopted as would be requisite to communicate words, sentences, or figures, from one station to another, and so on to the end of the line. I will take another opportunity to enlarge upon this, as I think it might serve many useful purposes; but, like all others, it requires time to mature. As it takes but little room, and may be fixed in private, it might, in many cases of besieged towns, &c., convey ample intelligence, with scarcely a chance of detection by the enemy. However fanciful in speculation, I have no doubt that, sooner or later, it will be rendered useful in practice."

We might proceed in a delineation of various interesting* passages in the

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* In Professor Steinheil's above cited article, he remarks as follows:—

"The velocity with which frictional electricity is transmitted along metallic conductors called forth, as long ago as in the last century, the idea of employing it for telegraphic communications. Winklen, at Leipsic, in 1746, discharged several Leyden jars through a wire of considerable length, and on that occasion the river Pleiss formed a part of his circuit. La Monnier, in Paris, produced shocks through a length of wire amounting to 12,789 feet. Watson extended the experiment over a space of four miles near Shooter's Hill, composing his circuit of two miles of wire and an equal distance of dry ground. [This was in 1747. See Philos. Trans., vol. 55, 1748.] Lomond transmitted telegraphic signals to a neighbouring room by means of a pith ball electrometer, acted upon by frictional electricity. [Young's Travels in France, 1784.] Reisen history and improvement, to its present practical use, of this same wonderful agent. But we are admonished to forbear, to make place for other considerations connected with the subject.

From the earliest period of commercial or political associations, the value of early intelligence, and the means of despatching messages to and fro, has been appreciated. Gibbon, in his Decline and Fall of the Roman Empire, says:

"The advantages of receiving the earliest intelligence and of conveying their orders with celerity, induced the Emperors to establish throughout their extensive dominions, the regular institutions of post. Houses were every where erected, at the distance of only five or six miles, and each of them was constantly provided with *forty* horses; and by help of these relays it was easy to travel at the rate of one hundred miles per diem. The use of the posts was allowed to those who claimed it by an imperial mandate; but though originally intended for the public service, it was frequently indulged to the business or convenience of private citizens."

The above marks the enterprise of that early day. No less than 800 horses were supported (40 to each 5 mile station) to keep up a line of despatches the distance of 100 miles! Were it required at this day, it may be questionable whether the enterprise would be found equal to it. And yet the end to be accomplished is quite indispensable.

By a return printed by order of the House of Commons, May 5, 1843, No. 236, it appears that the Semaphore communication between the Admiralty and Portsmouth, is only available for 100 hours out of every 545, and that the expense of working it, on an average of three years, is at the rate of £3,403 9s. 6d. per annum, exclusive of the first cost of erection and repairs, and exclusive of the ground which it was necessary to purchase in the first instance.

The French system of visual telegraphs consists of five great lines connecting Paris with the extreme cities of the kingdom—an aggregate distance of 1,474 miles, at an expense of $202,000 per annum.

In a report made by a Committee of the Great Western (London) Railway in 1840, it is stated that the lines of telegraph to Plymouth, to Yarmouth, and to Deal, were abandoned in 1816, on account of the great expenditure required for their maintenance; but that a line of magnetic telegraph, which had been constructed on that rail road line, had cost only from £250 to £300 per mile, and was worked "*at a trifling expense.*"

The report proceeds thus in respect to the magnetic telegraph:

"Your Committee are of opinion that circumstances may arise in which it may be very inconvenient to have in the hands of a private company, or possibly of an individual, the exclusive means of intelligence which this telegraph will afford; and it cannot fail to be of paramount importance that the government should be furnished with similar means of procuring and transmitting intelligence, and they believe that no railway company will object, on fair terms, to give every facility to the government for establishing a line of electrical communication over the whole length of their railway."

When it is considered, how vastly consequential and indispensable it is, to secure the greatest celerity of communication practicable, between all

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illuminated, by the electric spark, letters formed upon plates of glass with strips of tin foil. Gauss makes mention of a communication from Humboldt, according to which Betancourt, in 1798, established a communication between Madrid and Aranjuez, a distance of 26 miles, by means of a wire, through which a Leyden jar used to be discharged, which was intended to be used as a telegraphic signal."

the great commercial points of a nation;—what vast expense, for the establishment of this end, every people, ancient and modern, have been willing to incur; and to what inconsiderable expense of construction the system of electrical telegraphs has already been reduced—not exceeding the cost of $100,000 for a complete and effective line between Washington city and New York—and how "trifling" is the cost of its maintenance after once constructed; and that twenty-three of every twenty-four hours may be saved by it in the time of communicating between the points of the extension of such a telegraph; and with the stirring enterprise and example before us of the European governments, and business communities, in the introduction and use of this system, who can doubt—who is fool-hardy and blind enough to doubt that the time has come when these structures will start into being and action all over our country, and that the business and calculations of our merchants and men of enterprise, should be shaped with reference to such a new condition of their relations?

It is in the very nature of man to attain all advantages that are attainable, and though his approach to them may be slow, and cautious, at first; though one people may lay behind the enterprise of another people, in seizing upon the new developements of genius and science, yet in a comparatively short time the timid come up to the very outer footsteps of the more forward and bold adventurer, and reap in substantial advantages what the other sought under the excitement of fame and eclat. Steam being found, practically, more sure and rapid as a motive power, for intercommunication than wind, it has been, and will ever continue to be preferred before it, by the business world; and since lightning is found as available as steam, and almost incalculably more rapid, as a conductor of despatches, it is apparent that for all the latter purposes it *must* and *will* take the lead, and become the Archimedean lever that is to move the business world to and fro in its orbit.

OPERATION OF THE U. S. TARIFF.

The operation of our present tariff of duties on imports, enacted in August, 1842, has been most beneficial, whether we regard it as a measure for protection to our domestic industry, as was its first and most important object, or in its effects on the revenue; producing at the same time a very fair and moderate average rate of duty on commodities imported, which has generally proved satisfactory to consumers as well as importers. The benign influence of this great protective measure on the general industry of the country—on all the interests of agriculture, manufactures, and commerce—in restoring prosperity, and in sustaining a sound currency, is evident to all; so that the system of protection was, perhaps, never so much in favour with the great body of the people of this country as at the present time.

The following comparative statement of the amount of imports for the last fiscal year, and the gross amount of duties paid thereon, with the same for the last three years, when the compromise tariff act was in operation, shows the very moderate degree of protection afforded by the present tariff, and that the amount of duty collected is barely sufficient for the wants of government.

Value of Imports.

Year ending	Free of Duty.	Dutiable.	Total Imports.	Gross am't Duties.
30th June, 1844,	$24,766,082	$83,668,620	$108,434,702	$29,137,060
30th Sept., 1842,	30,627,486	69,534,601	100,162,087	16,622,746
" " 1841,	66,019,731	61,926,446	127,946,177	19,919,492
" " 1840,	57,196,204	49,945,315	107,141,519	15,104,790

The average rate of duty paid on all imports, including free articles, for the year ending June 30th, 1844, was about 26 3-4 per cent.; on dutiable articles only, 33 1-2 per cent.

In 1842, on total imports 16 1-2 per cent.; on dutiable articles only, 24 per cent.

In 1841, on total imports 15 1-2 per cent.; on dutiable articles only, 31 per cent.

Under the compromise act, an immense amount of revenue was thrown away, by the admission of a numerous list of articles free of duty; thus benefitting the foreign producers or manufacturers, without corresponding advantages to the people of the United States. This defect in our revenue laws has been corrected in the present tariff, by reducing the list of free articles to a reasonable amount: tea, coffee, and specie forming the largest proportion.

The following statement from the Treasury Department shows the amount of articles imported during the nine months ending 30th June, 1843, the duty on which exceeded 35 per cent. on the average wholesale market value of such articles:

Articles.	Invoice Value.	Amount of Duty.
Cotton yarn, twist, and thread, costing less than 60 cents per lb.,	$4,335	$3,130,
Carpeting, treble ingrain,	1,190	1,044
Sulphate of barytes,	2,154	2,792
Whiting and Paris white,	304	445
Litharge,	13	10
Sugar of lead,	497	437
Cordage, tarred, and cables,	26,570	19,050
" Untarred,	5,798	10,103
" Untarred yarn,	1,028	2,047
Cut glass,	4,237	5,793
Plain glass,	4,589	4,089
Cylinder window glass,	12,283	16,935
Crown window glass,	310	688
Demijohns,	644	1,039
Lead, old, and scrap,	190	194
Iron, spikes, cut or wrought,	227	187
" Chain cables and parts,	24,196	19,383
" Chains, other than cables,	4,662	4,357
" Steam, gas, or water tubes,	2,710	1,970
" Rod or square iron,	11,005	9,460
" Hoop Iron,	1,884	2,591
" Pig iron,	48,251	34,857
" Bar, manufactured by rolling,	511,282	393,946
Paper, medium, demy, and foolscap,	1,767	1,718
Spirits, from grain,	121,547	194,346
" from other materials,	32,095	101,548
Total manufactures,*	$823,768	$832,159

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* Some of the articles named on the next page, although belonging to the class of manufactures, may more properly, with few exceptions, be considered as agricultural products. It will be seen that about two-thirds of the total amount of these high duties is paid for the protection of agriculture—(sugar, &c.)

Articles.	Invoice Value.	Amount of Duty
Brought forward,	$823,768	$832,159
Wines, in casks, not specified,	2,845	2,321
Brandy,	106,261	191,832
Sugar, brown,	2,426,011	1,738,358
" Loaf, and other refined,	41,279	41,945
" Candy,	339	235
" Syrup,	57	92
Fruits, dates,	286	215
" Raisins,	314,858	240,366
Spices, black pepper,	56,664	73,686
" Red pepper,	1,426	1,511
" Pimento,	47,441	52,720
Cheese,	3,850	2,703
Beef and pork,	5,984	7,196
Coke, or culm,	69	90
Barley,	106	340
Total,	$3,831,244	$3,185,769

The average rate of duty on invoice cost is 83 per cent. The amount of charges for freight, insurance, &c., on the above articles, was $1,084,224, and the wholesale market value in the United States amounted to $8,101,246. On a home valuation, therefore, the average duty paid would have been a fraction less than 40 per cent.

ANTHRACITE COAL.

The annexed table, taken from the Pottsville Miner's Journal, giving an accurate account of the quantity of anthracite coal from the several mines of that invaluable mineral, derives importance over and above the valuable information it gives on the subject of that coal itself, from the fact of its now general use in the smelting of iron ore. No two minerals indeed can at all compare with iron and coal in their unlimited use in all the industrial arts. Until the discovery that anthracite coal could be made use of in the manufacture of iron, its immense importance was not fully realized.

Nor does its great value to the country stop here. Anthracite coal has been one among the great causes which have given rise to some of our largest internal improvements; witness the 5,587,930 tons from the Schuylkill mines that have found their way to market by the Schuylkill Canal; the 721,018 tons, which are brought to Philadelphia by the Reading rail road, which may be considered only as the commencement, since that road in 1844 conveyed 441,491 tons in one year, being more than half the whole quantity thus transported; and last, though not least in importance to this city, the 1,875,435 tons brought hither by the Delaware and Hudson Company. The great amount of tonnage employed in the transportation of anthracite coal is another item of great value, and its use is as much entitled to the name of commerce, as the transportation of flour or any other article to distant ports and other countries

The use of this coal in steamboats, too, how greatly has it added to the important article of fuel for that useful purpose !

It would be difficult to estimate the benefits and comforts that have resulted to the people of the United States, from the discovery of the immense basins of this coal with which the sea board of the State of Pennsylvania abounds, affording the cheapest fuel for domestic purposes, and a value to our manufactures which nothing else could supply.

ANTHRACITE COAL, TRADE OF THE UNITED STATES.

The following table exhibits the quantity of Anthracite Coal sent to market from the different regions of Pennsylvania, from the commencement of the trade in 1830, to 1844, inclusive, with the annual increase, consumption, &c.

Years.	SCHUYLKILL.			LEHIGH.	OTHER REGIONS.								
	Canal.	Rail Road.	Total.	Total.	Pine Grove.	Shamokin.	Lackawana.	Wilkesbarre.	Aggregate.	Annual Increase.	Consumption.	Unsold, April 1st.	Sold on Canal.
1820....	....	....	....	365	....	....	....	....	365	....	....	....	....
1821....	....	....	....	1,073	....	....	....	....	1,072	708	....	....	....
1822....	....	....	....	2,240	....	....	....	....	2,240	1,167	....	....	....
1823....	....	....	....	5,523	....	....	....	....	5,623	3,588	....	....	....
1824....	....	....	....	9,541	....	....	....	....	9,541	3,718	....	....	....
1825....	6,500	....	6,500	28,393	....	....	....	....	34,593	25,352	....	....	....
1826....	16,776	....	16,776	31,280	....	....	....	....	48,047	13,154	....	....	3,154
1827....	31,360	....	31,360	32,074	....	....	....	....	63,434	15,837	...	....	3,372
1828....	47,284	....	47,284	39,232	....	....	....	....	77,516	14,082	....	....	3,332
1829....	79,973	....	79,973	25,110	....	....	7,000	....	112,083	34,567	....	....	5,321
1830....	89.984	....	89,984	41,750	....	....	43,000	....	174,734	62,651	....	....	6,150
1831....	81,853	....	81,853	40,966	....	....	54,000	....	176,520	2,086	177,000	....	10,048
1832....	209,271	....	209,271	70,000	....	....	84,600	....	363,871	187,051	298,871	None.	13,429
1833....	252,971	....	252,971	123,000	....	...	111,777	....	487.748	123,877	434,986	65,000	19,429
1834....	226,692	....	226,692	106,244	....	....	43,700	....	376,636	Decrease.	415,186	117,762	18,571
1835....	339,508	....	339,508	131,250	....	....	90,000	....	560,758	184,122	635,935	70,212	17,863
1836....	432,045	....	432,045	146,522	....	....	103,561	....	682,428	121,670	632,428	4,035	21,749
1837....	523,152	....	523,152	225,937	17,000	....	115,387	....	681,476	199,048	680,441	54,035	28,775
1838....	433,875	....	433,874	214,211	13,000	....	78,207	....	739,293	Decrease.	788,968	255,070	30,390
1839....	442,608	....	442,608	221,850	20,639	11,930	122,300	....	819,327	80,034	867,000	205,395	28,924
1840....	452,291	....	452,291	225,288	23,860	15,505	148,470	....	865,444	46,087	973,136	157,622	41,223
1841....	584,692	....	584,692	142,841	17,653	21,463	192,270	....	958,899	93,485	958,899	100,000	40,584
1042....	491,602	49,290	540,872	272,129	32,381	10,000	205,253	47,346	1,108,001	149,102	1,159,001	100,000	34,619
1843....	447,058	230,237	677,295	267,734	22,905	10,000	227,605	58,000	1,263,539	155,538	1,213,537	50,000	60,000
1844....	398,443	441,491	839,934	.377,821	34,916	13,087	251,005	114,906	1,631,669	308,130	....	50,000	90,000
	5,587,930	721,018	6,308,948	2,773,654	185,354	81,985	1,875,435	220,252	11,445,628				

In 1820, only 365 tons were sent to market. In 1830, the quantity had reached 174,737 tons; in 1840, 805,414; in 1844, 1,631,699 tons. By this statement it will be observed that the trade has nearly doubled within the last four years.

A BIOGRAPHICAL SKETCH

OF THE LIFE OF DAVID RITTENHOUSE, ESQ., OF PHILADELPHIA,

A COTEMPORARY AND COMPANION OF FRANKLIN.

The village of Germantown, in the neighbourhood of Philadelphia, had the honour of giving birth to this distinguished philosopher, on the 8th day of April, 1732. His ancestry migrated from Holland about the middle of the eighteenth century.

The early part of his life was spent in agricultural employment, upon his father's farm in Montgomery County, Pennsylvania. It was there his peculiar genius first discovered itself. His plough, the fences, and even the stones of the field in which he worked, were frequently marked with figures which denoted his talent for mathematical studies. Upon finding that the native delicacy of his constitution unfitted him for the labours of husbandry, his parents consented to his learning the trade of a clock and mathematical instrument maker. In acquiring the knowledge of these arts he was his own instructor. They afforded him delight, inasmuch as they favoured his disposition to inquire into the principles of natural philosophy. Constant employment in the mechanic arts has proved the means in many instances of invigorating human genius. Franklin studied the laws of nature while he handled his printing types, and Herschel conceived the great idea of a new planet while he exercised the humble office of a musician to a marching regiment.

It was during his occupation in rural pursuits that our ingenious philosopher made himself master of Sir Isaac Newton's Principia, which he read in the English translation of Mr. Mott. It was thus likewise he became acquainted with the intricate science of fluxions, of which sublime invention he for awhile believed himself to be the author; nor did he know till some years afterwards that a contest had been carried on between Sir Isaac Newton and Leibrietz for the honour of that great and useful discovery. What a mind was here! Without literary friends or society, and with but few books, he became, before he had reached his four and twentieth year, the rival of two of the greatest mathematicians of Europe.

While working at his trade of a watchmaker, he planned and executed an orrery, in which were represented the revolutions of the heavenly bodies, in a manner more extensive and complete than had before been done by any former astronomer. A correct description of this orrery, drawn up by the Rev. Dr. Smith, is published in the first volume of the Transactions of the American Philosophical Society, the instrument being purchased by the College in New Jersey. A second was made by the inventor after the same model, for the use of the College of Philadelphia, and forms part of the philosophical apparatus of the University of Pennsylvania, where it has commanded the admiration of the learned and ingenious from every part of the world.

The reputation he derived from the construction of this orrery, as well as his general character for mathematical knowledge, could not fail to attract public notice; but the discovery of his uncommon merit belonged chiefly to his brother-in-law, the Rev. Mr. Barton, Dr. Smith, and Mr. John Lakens, an ingenious mathematician of Philadelphia. He yielded to their advice, and removed to that city in the year 1770. Here he continued for several years to follow his occupation as a clock and mathematical instrument maker, and in both branches of his business he excelled all others. His mathematical instruments have been esteemed by competent judges to have been superior in accuracy and workmanship to those of the same kind imported from Europe.

About the same time he removed to Philadelphia he became a member of the American Philosophical Society, his first communication to which was a calculation of the transit of Venus, as it was to happen on the 3d of June, 1769, in 40 deg. north latitude, and five hours west longitude from Greenwich. He was one of a Committee appointed by the Society to observe in the township of Norristown this rare occurrence, and he took the active part in the preparations which were made for that purpose. Of this Dr. Smith, who was also of the Committee, has left an honourable record in the history of that event, published in the first volume of their transactions.

"Mr. Rittenhouse's dwelling," says the Dr., "being about twenty miles north-west of Philadelphia, our other engagements did not permit Mr. Lakens or myself to pay much attention to the necessary preparations; but we knew that we had entrusted them to a gentleman on the spot (Mr. Rittenhouse) who united to a complete skill in mechanics, so extensive an astronomical and mathematical knowledge, that the uses, management, and construction of the apparatus were perfectly familiar to him. The laudable pains he had taken in these all important articles, will appear from the work itself, which he hath committed into my hands, with a modest introduction, giving me a liberty with it, which his own accuracy, taste, and abilities, leave no room to exercise."

To observe a phenomenon which had never been seen but twice before, by any inhabitant of our earth, which would never be seen again by any person then living, and on which depended many important astronomical consequences—and this by instruments of his own preparation, may well be conceived to have created in the mind of Mr. Rittenhouse the most intense interest.

The night before the long expected day was passed without much sleep; how great was the joy when they beheld the glorious morning sun, and the whole heavens without a cloud, for such is the description given by Mr. R. in the report referred to by Dr. Smith. In perfect silence, and with the most intense and trembling anxiety, they waited for the predicted moment of observation; it came! and brought with it all that had been predicted and anticipated! In the instant of the contact of the planet with the sun, the emotions of delight and joy were so great in our philosopher, his sensations were so exquisite and intense, as to prostrate his bodily strength, and cause him to faint away. This will readily gain credence with the sanguine inquirers after truth, who have known the extent of that pleasure which attends its discovery.

Soon after this event we find him acting as one of a Committee appointed to observe the transit of Mercury on the 9th of November in the same year. A minute history of these events, in which Mr. Rittenhouse acted so distinguished a part, is given in the Transactions of the American Philosophical Society, and have been received with great satisfaction by the astronomers of Europe, contributing greatly to exalt the character of our then infant country for astronomical knowledge.

In the year 1775 he was appointed to deliver the annual oration before the society—the subject was the history of Astronomy! His language was simple, but the sentiments were ingenious, and in some instances sublime. It was delivered in a feeble voice, but it commanded the most profound attention and universal admiration from a crowded and scientific audience. Mr. Rittenhouse published many essays on his favourite science.

Talents so splendid, and knowledge so practical in mathematics, are uncommonly rare in any country, and are like mines of precious metals; nor was the State of Pennsylvania insensible to the treasure she possessed in the mind of Mr. Rittenhouse; she claimed him as her own, and soon put in requisition his extraordinary powers.

In the year 1779 he was appointed by the Legislature of that State, one of the Commissioners for adjusting a territorial dispute between Pennsylvania and Virginia; and to his talents, moderation, and firmness, were ascribed, in a great degree, the satisfactory termination, in 1785, of that once threatening controversy.

In 1784 he assisted in determining the length of five degrees of longitude, from a point on the Delaware, in order to fix the western limits of Pennsylvania. In 1786 he was employed in fixing the northern line which divides Pennsylvania from New York.

But the application of his rare talents and knowledge in these difficult and delicate matters of territorial limits, was not confined to his native State; for in 1769 he was employed in settling the limits between New Jersey and New York; and this closed his career, and constituted his farewell peace-offering to the union and happiness of his country.

In his excursions through what was then a wilderness, he invariably carried with him his habits of inquiry and observation; nothing in the mountains, soils, rivers, and springs, escaped his notice. It is to be lamented that we have no printed records of what he collected on these occasions. In the year 1791 he was chosen successor to Franklin, as President of the American Philosophical Society. In this, the most elevated station that philosophy can confer in the United States, his conduct was marked by its usual dignity and propriety. Never did the artificial pomp of station command half the respect which were accorded to his unassuming manners in the discharge of his official duties. They were uniformly characterized by ardour in the pursuit of science, urbanity and suavity of deportment, amounting almost to brotherly kindness; and his attachment to the interests of the Society was evinced soon after he accepted the chair, by a donation of eight hundred dollars.

His talents and information were not limited to mathematical or material science; his mind was a rich repository of the knowledge of all ages and countries. He had early and deeply studied most of the systems of theology. He was well acquainted with metaphysics. In reading travels he took great delight; from them he drew a large fund of knowledge of the natural history of the globe. He possessed an ear for music, and was fond of poetry, in both of which he occasionally indulged; but the more serious pursuits of his life prevented his devoting much time to their cultivation, though he often read the English poets, and was a great admirer of Thompson's Seasons, which, he said, combined philosophy and poetry.

However opposite to his other studies these may at first appear, they derive their perfection from the same extensive and accurate observations of the beauties of nature. He was intimately acquainted with the Dutch, the German, and the French languages; the two latter of which he acquired without the aid of a master. They opened to him the discoveries of foreign nations, and enabled him the better to pursue his favourite studies.

In speaking of Mr. Rittenhouse, it has been customary to regret his want of what is called a liberal education—but that we have lost any thing from this may well be doubted. Nature was his teacher, and his powerful mind was stored with knowledge which he had imbibed at her great fountain. Had the usual forms of education been imposed upon such a mind, instead of soaring to the heavens, and roaming at large amidst moving worlds, with his fondness for music and poetry, he might have spent his hours of study in the less sublime pursuit of the modulations of sound, or measuring the feet of Greek and Latin poetry.

Inventions and improvements in every art and science were frequently submitted to his examination, and his judgment upon them gave the tone to public approval or rejection. Wherever he went he met with demonstrations of public respect and private attention. But not to his own country alone was his reputation confined; his name was known and his character admired in every land where science dwelt and genius was cultivated. The degree of Master of Arts was conferred upon him by the College of Philadelphia in 1768. The same degree was awarded to him by the College of William and Mary, in Virginia, in 1784. In the year 1789 he received the degree of Doctor of Laws in the College of New Jersey—was elected a member of the American Academy of Arts and Sciences at Boston in 1782, and of the Royal Society of London in 1795. But if he was great in the higher walk of scientific knowledge, he was no less conspicuous in his religious and moral character. He had the most profound respect for sacred things; and we find, in some of his works, the happiest expressions of confidence in the benificence and wisdom of Providence. In one of his orations, he says:—

"Should it please that Almighty power who hath placed us in a world in which we are only permitted 'to look about us and to die,' to indulge us with existence throughout that part of eternity which remains unspent, and to conduct us through the several stages of his works, *here* (alluding to the study of astronomy) is ample provision made for employing every faculty of the mind, even allowing its powers to be enlarged through an endless repetition of ages. Let us not, then, complain of the vanity of this world, and that there is nothing in it capable of satisfying us. Happy in those wants—happy in desires for ever in succession to be gratified—happy in a continual approach to the Deity."

"I must confess I am not one of those sanguine spirits who seem to think that when the withered hand of death shall draw up the curtain of eternity, all distance between the creature and the Creator—between the finite and the infinite—will be annihilated. Every enlargement of our faculties—every new happiness conferred upon us—every step we advance towards the Divinity—will very probably render us more and more sensible of his inexhaustible stores of communicable bliss, and of his inaccessible perfection." In another instance, in a letter to a friend, he says:—"Give me leave to mention two or three particular proofs of infinite goodness in the works of creation. The first is, that of possessing goodness in ourselves; and it is inconsistent with all just reasoning to suppose that there is any thing good, lovely, or praiseworthy in us, which is not possessed in an infinitely higher degree in that Being who called us into existence. In the next place I reckon—the exquisite and innocent delight that many things around us are calculated to afford. In this light the beauty and fragrance of a single rose is a better argument for Divine goodness than a luxuriant field of wheat. For, if we *could* suppose that we were created by a malevolent being, with a design to torment us for his amusement, he must have furnished us with the means of subsistence, and either have made our condition tolerable, or not have left the means of quitting it at pleasure, in our power. Such being my opinion, you will not wonder at my fondness for what Addison calls the pleasures of the imagination. They are all to me so many demonstrations of infinite goodness."

But the religion of Mr. Rittenhouse was not derived wholly from his study and admiration of the material world. He was a firm believer in the Christian revelation; and of this he gave many proofs, in the conformity of his life to the precepts of the Gospel. He once said to a friend, speaking of the truth and excellency of the Christian religion, "that a proof of its Divine origin might be seen in the fact, that the miracles of the Saviour differed from all other miracles, in being entirely of a kind and benevolent nature." As the natural effect of his belief in the relation of the whole human race to each other, in a common father and redeemer, he embraced the whole family of mankind in the arms of his benevolence. The philanthropy of Mr. Rittenhouse did not consist simply in wishes for the happiness of mankind. He reduced this divine principle to practice, by a series of faithful and disinterested services to that part of his fellow creatures to which the usefulness of good men is chiefly confined. His country, his beloved country, was the object of the strongest affections of his heart. For her he thought, for her he laboured, and for her, in the hour of her difficulties and dangers, he mourned. The year of the Declaration of Independence produced no change of his political principles—for he had been educated a republican by his father. He ever avowed, with the sincerest pleasure, his secret attachment to an elective and representative form of government; and twenty years before his death he predicted the immense increase of talents and knowledge that would be produced by our republican institutions on the American character, and that the effects of our revolution would sow the seeds of a new order of things in other parts of the world. He believed political, as well as moral evil, to be intruders into the society of men—that general happiness was the original design and ultimate end of the Divine government; and that the time would come when every part of our globe would echo back the heavenly proclamation of "peace on earth, and good will to man."

In the more limited circles of private life Mr. Rittenhouse commanded esteem and affection. As a neighbour he was kind and charitable. His sympathy was warm to distress of every kind, but it was more alive to the weakness, pain, and poverty of old age. As a friend he was sincere, ardent, and disinterested. As a companion he instructed his associates upon all subjects. His family constituted his chief society, and when the declining state of his health rendered his studies irksome, he passed whole evenings of his time in reading to, or conversing with, his wife and daughters.

His house, and manner of living, exhibited the taste of a philosopher, the simplicity of a republican, and the temper of a christian. He was independent, and contented with an estate small in the estimate of ambition or avarice, but amply suited to all his wants and desires. He held the office of Treasurer of the State of Pennsylvània by an annual and unanimôus vote of the Legislature, from the year 1777 to 1789, and during the whole period declined purchasing the smallest portion of the public debt of the State, thereby manifesting a delicacy of integrity known and felt only by pure and elevated minds.

In the year 1792 he was persuaded to accept the office of Director of the Mint of the United States, but his want of health obliged him to resign it in 1795. Here his conduct was alike highly delicate, for he sometimes paid for work done at the Mint out of his own salary, when he thought the charges would be deemed extravagant by the United States. His economy extended to the employment of his time in a useful manner—no man ever found him idle.

His countenance was remarkable; it displayed such a mixture of contemplation, benignity, and innocence, that it was easy to distinguish him in the largest companies by a previous knowledge of his character. His manners were so universally benign and engaging that he seldom stopped an hour in travelling through the country without being followed by the good wishes of all who attended upon him. There was no affectation of singularity in anything he said or did; he was remarkable for his uncommon modesty, so much so that he appeared to be wholly unconscious of his superiority of intellect. His constitution was naturally feeble, but it was rendered still more so by the sedentary nature of his studies, which often found him consuming the midnight oil.

On the 26th of June, 1796, he breathed his last, and at his request his body was interred in his observatory near his dwelling house, in the presence of a numerous concourse of his fellow citizens.

Thus lived and died this great and extraordinary man, who, like Newton, had soared into the highest regions of science—offering another proof that the humblest origin, and the most adverse circumstances, cannot limit nor control those wonderful gifts of nature, which enable their possessors, as if by a decree of Providence, to dive into the deepest mysteries of his creation.

But what shall we say of the anomaly that the subject of this memoir should have succeeded Franklin as President of the American Philosophical Society! Franklin, who from a like obscure birth has left behind him a name never to be forgotten while the lightning shall gleam in the heavens! and Rittenhouse, whose splendid genius and civic virtues entitle his memory to the highest honours his country can bestow.

FREE TRADE AND PROTECTION.

Whoever has travelled in the highlands of Scotland, or the mountains of Wales, must have observed the remarkable difference which exists between artificial plantations, and the natural woods of the country. Planted *all at once*, the former grow up of uniform height, and all their trees present nearly the same form and symmetry. Sown at different periods, with centuries between their growth, the latter exhibit every variety of age and form, from the decaying patriarchs of the forest, which have survived the blasts of some hundred years, to the infant sapling, which is only beginning to shoot under the shelter of a projecting rock or stem. Nor is the difference less remarkable in the room which is severally afforded for growth, in the artificial plantations and in the wilds of nature. The larchers or furs, in the stiff and angular inclosure, are always crowded together; and, if not thinned by the care of the woodman, will inevitably choke each other, or shoot up thin and unhealthy, in consequence of their close proximity to each other, and the dense mass of foliage which overshadows the upper part of the wood. But no such danger need be apprehended in the natural forest. No woodman is called to thin its denizens. No forester's eye is required to tell which should be left, and which cut away, in the vast array. In the ceaseless warfare of the weaker with the stronger, the feeble plants are entirely destroyed. In vain the infant sapling attempts to contend with the old oak, the branches of which overshadow its growth—it is speedily crushed in the struggle. Nor are the means of removing the useless remains less effectual. The hand of nature insensibly clears the waste of its incumbrances; the weakness of time brings them to the ground when their allotted period is expired; and youth, as in the generations of men, springs beside the decay of age, and finds ample room for its expansion over the fallen remains of its paternal stems.

The difference between the artificial plantation and the natural wood, illustrates the distinctions between the imaginary communities which the political economist expects to see grow up, in conformity with his theories, and acting in obedience to his dictates, and the nations of flesh and blood which exist around us, of which we form a part, and which are immediately affected by ill-judged or inapplicable measures of commercial regulation. Nations were planted by the hand of nature; they were not sown, nor their place allotted by human foresight. They exist often close to each other, and under apparently the same physical circumstances, under every possible variety of character, age, and period of growth. The difference even between those ruled by the same government, and inhabited apparently by the same race, is prodigious. Who could suppose that the Dutchman, methodical, calculating, persevering, was next neighbour to the fiery, warlike, and impetuous Frenchman? Or that the southern and western Irish, vehement, impassioned, and volatile, came from the same stock which pervades the whole west of Britain? England, for centuries the abode of industry, effort, and opulence, is subject to the same government, and situated in the same latitude, as Ireland, where indolence is almost universal, wealth rare, and manufactures in general unknown. Russia, ignorant, united, and ever victorious, adjoins Poland, weak, distracted, and ever vanquished; and Prussia has risen with unheard-of rapidity in national strength and every branch of industry, at the very time when Spain was fast relapsing into slavery and barbarism.

Familiar as these truths are to all, they seem to have been, in an unaccountable manner, forgotten by our modern political economists ; and the oblivion of them is the principal cause of the remarkable failure which has attended the application to practice of all their theories. They invariably forget the different age of nations; they overlook the essential difference between communities with different national character, or in different stages of manufacturing or commercial advancement, and fall into the fatal error of supposing that one general system is to be readily embraced by, and found applicable to, a cluster of nations existing under every possible variety of physical, social, and political circumstances. Fixing their eyes upon their own country, or rather upon the peculiar interest to which they belong in their own country, they reason as if all mankind were placed in the same circumstances, and would be benefited by the arrangements which they find advantageous. They forget that all nations were not planted at the same time, nor in the same soil; that the difference in their age, the inequality in their growth, the variety in their texture, is as great as in the trees of the forest, the seeds of which have been scattered by the hand of nature; that the incessant warfare of the weaker with the stronger, exists not less in the social than the physical world; and that all systems founded on the oblivion of that continued contest, must ever be traversed by the strongest of all moral laws—the instinct of SELF-PRESERVATION.

We have said that the modern theories, when applied to practice, have, in a remarkable manner, failed. In saying so, we have chiefly in view the acknowledged failure of the strenuous efforts made by England, during the last twenty years, to effect an interchange in the advantages of free trade, and the entire disappointment which has attended the long establishment, on a great scale, of the reciprocity system. To the first we shall advert in the present paper; the second will furnish ample room for reflection in another.

The abstract principles on which the doctrines of free trade are founded, are these: and we put it to the warmest advocates of those principles, whether they are not fairly stated. All nations were not intended by nature, nor are they fitted by their physical circumstances, to excel in the same branches of industry; and it is the variety in the production which they severally can bring to maturity, which at once imposes the necessity for, and occasions the profit of, commercial intercourse. Nothing, therefore, can be so unwise as to attempt, either by arbitrary regulations, to create a branch of industry in a country for which it is not intended by nature, or to retain it in that branch where it is created by forced prohibition. Banish all restrictions, therefore, from commerce; let every nation apply itself to that particular branch of industry for which it is adapted by nature, and receive in exchange the produce of other countries, raised in like manner in conformity with their natural capabilities. Then will the industry of each people be turned into the channel most advantageous and lucrative to itself; each will enjoy the immense advantage of purchasing the commodities it requires at the cheapest possible rate;

hopeless or absurd hot-bed attempts to force extraneous industry will cease; and, in the mutual interchange of the surplus produce of each, the foundation will be laid of an advantageous and durable commercial intercourse. England, on this principle, should not attempt to raise wine, nor France iron or cotton goods; but the calicoes and hardware of Great Britain should be exchanged for the wines and fruits of France: both nations will thus be enriched, and a vast commercial traffic grow up, which, being founded on mutual interest and attended with mutual advantage, may be expected to be durable, and to extinguish, in the end, the rivalry of their respective people, or the jealousy of their several governments.

Such is the theory of free trade; and it may be admitted it wears at first sight a seducing and agreeable aspect. Let us now inquire how far experience, the great test of truth, has verified its doctrines, or demonstrated its practicability. To illustrate this matter, we shall have recourse to no mean or doubtful authority; we shall have recourse to the statement of an enlightened but candid cotemporary, whose advocating of a moderate system of free trade has excited no small anxiety in the British empire; and which report, from the information and ability it displays, has assigned to the present accomplished head of the Board of Trade.

The efforts made in Great Britain to introduce a general system of free trade, especially within the last three years, are thus enumerated in the *Foreign and Colonial Review*.

"England, without gaining or asking a single boon from any foreign country, has—

"1. Reduced by about one-half the duties upon foreign corn.

"2. By nearly the same amount, the duties on foreign timber.

"3. Has removed her prohibitions against the importation of cattle and other animals for food, and has fixed upon them, duties, ranging on the average at about ten per cent. *ad valorem*.

"4. Has made flesh meat admissible.

"5. Has reduced the duty on salt provisions for home consumption by one-third, and one-half; and has placed them on a footing of entire equality with the British article for the supply of the whole marine frequenting her ports.

"6. Has lowered her duties on vegetables and seeds in general to one-half, one-sixth, and even one-twelfth (in the case of that most important esculent, the potatoe) of what they formerly were.

"7. Has made all *great* articles of manufacture, except silk, which is reserved for future negotiations, admissible at duties of ten, twelve and a half, and fifteen per cent., and only in some few instances so much as twenty per cent.

"8. Upon some minor articles of manufacture, where our people lie under heavy disadvantages in obtaining the raw material, and where their habits have been formed in their particular occupation, wholly under the shelter, and therefore upon the responsibility of the law, she has retained duties in some cases as high as thirty per cent. *ad valorem*, but yet has reduced them in rates insignificant in comparison with those formerly charged.

"9. In her colonies, she has fixed the ordinary rules of differential duties upon foreign productions at four and seven per cent., with exceptions altogether trifling in amount, on which a higher charge has been laid for special reasons.

"10. She has withdrawn the prohibition to export machinery, except so far as regards the linen manufacture, and the spinning of the yarns employed in it.

"11. With regard to many other articles, such as butter and cheese, indeed, with regard to all articles to which the simple and essential interests of the revenue will allow the same rules to be applied—it has been declared that they are only temporarily exempted from the operations of those rules; and it is well understood, that no time will be allowed to pass, except such as is necessary, before the work is completed; and lastly,

"12. She has not even excluded from the benefit of these reductions the very countries under whose simultaneous enactments, of a hostile character, she is at this moment suffering: these advantages will be enjoyed by the tar and cordage of Russia; by the corn and timber, the woollens, linens, and hosiery of northern Germany; by the gloves, the boots and shoes, the light writing-papers, the perfumery, the corks, the straw-hats, the cottons and cambrics, the dressed skins, the thrown silk, and even (from an incidental charge with respect to the charge of duty on the bottles) the wines of France; by the salt provisions, the ashes, the turpentine, the rice, the furs and skins, the sperm oil of America; and she in particular may expect to derive advantage from the alteration in our colonial import duties upon the great articles of flour, salt, provisions, fish and lumber."*

Such have been the sacrifices which Great Britain has recently made in order to secure a system of free commercial enterprise throughout the world. Let us now inquire what return she has met with for these concessions; and the recent occurrences in this respect are detailed in the same unexceptionable authority.

"Within the last year, France has passed an ordinance, doubling the duty on linen yarns—a measure hostile enough, had it been uniform in its application to all countries; but, lest there should be any ambiguity about its meaning, she has actually left open her Belgian frontier to that article at the former duty, on the condition that Belgium should levy the high French duty in her custom-houses, so as to prevent the transit of the British yarns through that country. To this disreputable and humiliating proposal, Belgium has consented. Again, amidst the loudest professions from the Prussian government, of an anxiety to advance the relaxation of commercial restrictions, that government has, nevertheless, adopted a proceeding not less hostile or mischievous than the measure of France with regard to linen yarns. The Congress of the Deputies of the Zollverein, at Stutgard, have in a new tariff, which was to take effect on the 1st of January, besides some minor alterations of an unfavourable kind, decreed, upon the proposal of Prussia, that goods mixed of cotton and wool, if of more than one colour, shall pay fifty thalers the centner, instead of thirty; that is, instead of a very high, shall be liable to an exorbitant, and, as it may prove, a prohibitory duty. Next, America, as all our readers must be aware, has, after a struggle, passed a tariff, subverting altogether the arrangement established by the Compromise Act of 1833, and imposing upon the various descriptions of manufactured goods rates of duty varying from thirty to forty and fifty per cent. and upwards, which have had the effect of stopping a great portion of the shipments of cotton goods to that country from Great Britain during the past autumn, and, without doubt, have added greatly to the distresses of our manufacturing population. Besides these greater instances, Russia, according to her wont in such matters, and Spain, have published, within the last fifteen months, new tariffs, of which it is difficult to say whether they are still worse than, or only as execrably bad as, those which they succeeded; but, in the close rivalry between the old and the new, the latter seem, upon the whole, entitled to the palm of prohibitive rigour. And Portugal, likewise, has augmented the duties payable upon certain classes of her imports, by a measure of the recent date of March, 1841, and by another of last year. In the mean time, Spain has concluded a treaty with Belgium for the admission of her linens. And the King of Prussia has effected an arrangement with the Czar, which, in certain particulars, secures, upon his own frontier, a relaxation of the iron strictness of the Russian system. England has concluded no commercial treaty with any of these powers; and the negotiation with France, which the measures of Lord Palmerston interrupted in 1840, at the very period of its ripeness, appears still to slumber—owing, we believe, in part, to the prevalence of an anti-Anglican feeling in that country, which, for the credit of common sense and of human nature, we trust will be temporary; but much more to the high protective notions, and the political activity and influence of the French manufacturers, which overawe an administration far less strong, we regret to say, than it deserves."

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* Foreign and Colonial Review, Vol. 1, p. 235.

Our recent attempts, therefore, to introduce a general system of free trade among nations, have proved a signal failure, on the admission of the most enlightened advocates for that species of policy. Nor have our earlier efforts been more successful. Mr. Huskisson, as it is well known, introduced, full twenty years ago, the system of free trade, and repealed the navigation laws, in the hope of making the Northern Powers of Europe more favourable to the admission of British manufactures, and materially reduced the duties on French silks, watches, wines and jewelry, in the hope that the Government of that country would see the expedience of making a corresponding reduction in the duties levied on our staple manufactures in the French harbours. But after twenty years' experience of these concessions on our part, the French Government are so far from evincing a disposition to meet us with a similar conciliatory policy, that they have done just the reverse. Scarce a year has elapsed without some additional duty being imposed on our fabrics in their harbours; and the great reductions contained in Sir R. Peel's tariff were immediately met, as already noticed, by the imposition of an additional and very heavy duty on British linens. Nay, so far has the free trade system been from enlarging the market for our manufactures in Europe, that after twenty years' experience of its effects, and an increase over Europe generally of fully a third in numbers, and at least a half in wealth, it is an ascertained fact, that our exports to the European States *are less than they were forty years ago*. "That part of our commerce," says Mr. Porter, himself a decided free trader, "which, being carried on with the rich and civilized inhabitants of European nations, should present the greatest field for extension, will be seen to have fallen off in a remarkable degree. The annual average exports to the whole of Europe were *less in value by nearly twenty per cent.* on an average of five years, from 1832 to 1836, *than they were during* *the five years that followed the close of the war;* and it affords strong evidence of the unsatisfactory footing on which our trading regulations with Europe are established, that our exports to the United States of America, which, with their population of 12,000,000 (in 1837), are situated 3000 miles from us across the Atlantic, have amounted to more than half the sum of our shipments to the whole of Europe, with a population of fifteen times as great as that of the United States of America, and with an abundance of productions suited to our wants, which they are naturally desirous of exchanging for the produce of our mines and looms."*

This was written by Mr. Porter in 1837; but while subsequent times have evinced an increased anxiety on the part of this country to extend the principles of free trade, they have been met by such increased determination on the part of the European governments to *resist the system*, and adhere more rigorously to their protecting policy, that the disproportion is now universal, and is every day becoming more remarkable. The following table will show that our exports to Europe, notwithstanding our twelve reciprocity treaties with its maritime powers, and unceasing efforts to give a practical exemplification of the principles of free trade, are stationary or declining.†

In one particular instance, the entire failure of the free trade system to procure any corresponding return from the very continental states whose harbours it was chiefly intended to open, has been singularly conspicuous. In February, 1821, the reciprocity system, in regard to shipping, was introduced by Mr. Huskisson, and acted upon by the legislature; and the following reason was assigned by that eminent man for deviating from the old navigation laws of Cromwell, which had so long constituted the strength of the British navy. Mr. Huskisson maintained—"That the period had now arrived, when it had become indispensable to introduce a more liberal system in regard to the admission of foreign shipping into our harbours, if we would avoid the total exclusion of our manufactures from their harbours. The exclusive system did admirably well, as long as we alone acted upon it; when foreign nations were content to take our goods, though we excluded their shipping. But they had now become sensible of the impolicy of such a system, and, right or wrong, were resolved to resist it. Prussia, in particular, had resisted all the anxious endeavours of this country, to effect the introduction of goods of our manufacture, on

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* Porter's Progress of the Nation, vol. 1, p. 101.

† Table showing the date and value of Exports of British Manufactures to Europe in the after mentioned years.

Years.	Northern Europe.	Southern Europe.	Total.
1814,	£14,113,773	£12,753,816	£26,867,589
1815,	11,791,692	8,764,562	20,556,544
1816,	11,369,086	7,284,467	18,653,555
1817,	11,408,083	9,685,491	19,093,574
1818,	11,809,243	7,639,139	19,448,382
1819,	9,805,397	6,896,287	16,601,684
1820,	11,289,891	7,139,042	18,428,433
1833,	9,313,549	5,686,949	15,000,498
1834,	9,505,892	8,501,141	18,007,033
1835,	10,303,316	8,161,117	18,464,433
1836,	9,999,861	9,011,205	19,000,066
1837,	11,097,436	7,789,126	18,187,662
1838,	11,258,473	9,481,372	20,739,845
1839,	11,991,236	9,376,241	21,367,477

favourable terms, into her harbours; and the reason assigned was, that the navigation laws excluded her shipping from ours. The reciprocity system has been rendered indispensable by the prohibitory system which other European powers have adopted. The only means of meeting the heavy duties they have imposed on our goods and shipping, is to place our duties upon a system of perfect reciprocity with theirs. Foreign nations have no advantages over us in the carrying trade; from the London report, it clearly appeared, that the ships of Norway, Sweden, Russia, Prussia, France, and Holland, cannot compete with British, either in long or short voyages. But at any rate, the repeal of our discriminating duties has become a matter of necessity, if we would propose any trade with these countries.*

Such were Mr. Huskisson's reasons. They were grounded on alleged necessity. He said in substance:—"The navigation laws are very good things; and if we could only persuade other nations to take our goods, while we virtually shut out their shipping, it would, doubtless, be very advisable to continue the present system. But you can no longer do this. Foreign nations see the undue advantage which has been so long obtained of them. They insist upon an exchange of interests. We, as the richer and the more powerful, are called on to make the first advances. We must relinquish our navigation laws in favour of their staple manufacture, shipping, if we would induce them to admit, on favourable terms, our staple article, cotton goods." These were Mr. Huskisson's principles; and it may be admitted that, in the abstract, they were well-founded; for all commercial intercourse, to be beneficial and lasting, must be founded on a mutual exchange of advantages. But, in carrying into execution this

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* Hansard's Parliamentary Debates, February 13, 1823; and Annual Register, 1823, p. 104.

Table showing the British and Foreign tonnage, with Sweden, Norway, Denmark, and Prussia, since 1823, when the reciprocity system began, in each of the following years:—

Years.	SWEDEN.		NORWAY.		DENMARK.		PRUSSIA.	
	British Tons.	Foreign Tons.	British Tons.	Foreign Tons.	British Tons.	Foreign Tons.	British Tons.	Foreign Tons.
1821	23,005	8,508	13,855	61,342	5,312	3,969	79,590	37,720
1822	20,799	13,692	13,377	87,974	7,096	3,910	102,847	58,270
1823	20,986	22,529	13,122	117,015	4,413	4,795	81,202	86,013
1824	17,074	40,092	11,419	135,272	6,738	23,689	94,664	151,621
1825	15,906	53,141	14,825	157,910	15.158	50,943	189,214	182,752
1826	11,829	16,939	15,603	90,726	22,000	56,544	119,060	120,589
1827	11,719	21,822	13,945	96,420	10,825	52,456	150,718	109,184
1828	14,877	24,700	10,826	85,771	17,464	49,293	133,753	99,195
1829	16,536	25,046	9,985	86,205	24,576	53,390	125,918	127,861
1830	12,116	23,158	6,459	84,585	12,210	51,420	102,758	139,646
1831	11,450	38,689	4,518	114,865	6,552	62,190	83,908	140,532
1832	8,335	25,755	3,798	82,155	7,268	35,772	62,079	89,157
1833	10,009	29,454	5,901	98,931	6,840	38,620	41,735	108,753
1834	15 353	35,910	6,403	98,303	5,691	53,282	32,021	118,111
1835	12,036	35,061	2 592	95,049	6,007	49,008	25,514	124,144
1836	10,865	42.439	1,573	125,875	2,152	51,907	42,567	174,439
1837	7,608	42,602	1,035	88,004	5,357	55,961	67,566	145,742
1838	10,425	38,991	1.364	110,817	3,466	57,554	86,734	175,643
1839	8,359	49,270	2,582	109,228	5,535	106,960	111,470	229,208
1840	11,933	53,337	3,166	114,241	6,327	103,067	112,709	237,984

—PORTER's *Parl. Tables.*

principle, he committed a fatal mistake, which has already endangered, without the slightest advantage, and, if persevered in, may ultimately destroy the commercial superiority of Great Britain. He virtually repealed, by the 4 Geo. IV. c. 77, and the 5 Geo. IV. c. 1, the navigation laws, by authorizing the King, by an order in council, to permit the exportation and importation of goods in foreign vessels, on payment of the same duties as were chargeable on British vessels, in favour of those countries which did not levy discriminating duties on British vessels bringing goods into their harbours, and to levy on the vessels of such countries the same tonnage duties as they charged on British vessels. This was, in effect, to say—We will admit your vessels on the same terms on which you admit ours; and nothing, at first sight, could seem more equitable.

But, nevertheless, this system involved a fatal mistake, the pernicious effects of which have now been amply demonstrated by experience, and which lies at the bottom of the whole modern doctrines of free trade. *It stipulates for no advantage corresponding to the concession made*, and thus the reciprocity was on one side only. Mr. Huskisson repealed, in favour of the Baltic powers, the British navigation laws; that is, he threw open to Baltic competition, without any protection, the British shipping interest; but *he forgot to exact from them any corresponding favour for British iron or cotton goods in the Baltic harbours.* He said—"We will admit your shipping on the same terms on which you admit ours." What he should have said is—"We will admit your shipping into our harbours on the same terms you admit *our cotton goods* in your harbours." This would have been real reciprocity, because each side would have given free ingress to that staple commodity in which its neighbour had the advantage; and thus the most important branch of industry of each would have been secured an inlet into the other's territories. The British tonnage might have been driven out of the Baltic trade by the shipowners of Denmark and Norway; but the Prussian cotton manufactures would have been crushed by the British. It might then have come to be a question of whether the upholding of our shipping interest or the extension of our cotton manufactures was the most advisable policy. But no such question need be considered now. We have gained nothing by exposing our shipping interest to the ruinous competition of the Baltic vessels. The Danish, Norwegian, and Prussian ships have come into our harbours, but the British cotton and iron goods have not entered theirs. The reciprocity system has been all on one side. After having been twenty years in operation, it has failed in producing *the smallest concession* in favour of British manufactures, or producing in those states with whom the reciprocity treaties were concluded, the *smallest extension of British exports*. Since we so kindly permitted it, they have taken everything and given nothing. They have done worse. They have taken good and returned evil. The vast concession contained in the repeal of our navigation laws, has been answered by the enhanced duties contained in the Prussian Zollverein. Twenty-six millions of Germans have been arrayed under a commercial league, which, by levying duties, practically varying from thirty to fifty, though nominally only ten *per. cent*, effectually excludes British manufactures; and, after twenty years' experience, our exports are only a few hundred thousands a year, and our exports of cotton manufactures *only a few hundreds a year*, to the whole States of Northern Europe, in favour of whom the navigation laws were swept away, and an irreparable wound inflicted on British maritime interests, and in whose wants Mr. Huskisson anticipated a vast market for our manufacturing industry, and an ample compensation for the diminution of our shipping interest.

Nature has established this great and all-important distinction between the effects of wealth and national age on the productions of agriculture and of manufactures. The reason is this:—If capital, machinery, and knowledge, conferred the same immediate and decisive advantage on agricultural, that they do on manufacturing industry, old and densely-peopled states would possess an undue superiority over the ruder and more thinly-inhabited ones; the multiplication of the human race would become excessive in the seats in which it had first taken root, and the desert parts of the world would never, but under the pressure of absolute necessity, be explored. The first command of God to man, "Be fruitful, and multiply, and replenish the earth, and subdue it," would be frustrated. The apprehensions of the Malthusians as to an excessive increase of mankind, with its attendant dangers, would be realized in particular places, while nineteen-twentieths of the earth lay neglected in a state of nature. The desert would be left alone in its glory. The world would be covered with huge and densely-peopled excrescences—with Babylons, Romes, and Londons—in which wealth, power, and corruption were securely and permanently entrenched, and from which the human race would never diverge but under the pressure of absolute impossibility to wrench a subsistence from their over-peopled vicinities.

These dangers, threatening alike to the moral character and material welfare of nations, are completely prevented by the simple law, the operations of which we every day see around us—viz., that wealth, civilization, and knowledge, add rapidly and indefinitely to the powers of manufacturing and commercial, but comparatively slowly to those of agricultural industry. This simple circumstance effectually provides for the dispersion of the human race, and the check of an undue growth in particular communities. The old state can always undersell the young one in manufactures, but it is everlastingly undersold by them in agriculture. Thus the equalization of industry is introduced, the dispersion of the human race secured, and a limit put to the perilous multiplication of its numbers in particular communities. The old state can never rival the young ones around it in raising subsistence; the young ones can never rival the old one in manufactured articles. Either a free trade takes place between them, or restrictions are established. If the commercial intercourse between them is unrestricted, agriculture is destroyed, and with it national strength is undermined in the old state, and manufactures are nipped in the bud in the young ones. If restrictions prevail, and a war of tariffs is introduced, the agriculture of the old state, and with it its national strength, is preserved, but its export of manufactures to the adjoining states is checked, and they establish growing fabrics for themselves. Whichever effect takes place, the object of nature in the equalization of industry, the limitation of aged communities, and the dispersion of mankind, is gained, in the first, by the ruin of the old empire from the decay of its agricultural resource; in the second, by the check given to its manufacturing progress, and the transference of mercantile industry to its younger rivals.

Generally the interests and necessities of the young states introduce a prohibitory system to exclude the manufactures of the old one; and it is this necessity which England is now experiencing, and vainly endeavours to obviate, by introducing a system of free trade. But in one memorable instance, and one only, the preponderance of a particular power rendered this impossible, and illustrated on a great scale, and over the whole civilized world, for a course of centuries, the effects of a perfect freedom of trade. The Roman empire, spreading as it did round the shores of the Mediterranean, afforded the utmost facilities for a great internal traffic; while the equal policy of the emperors, and, indeed, the necessity of their situation, introduced a perfect freedom in the interchange of commodities between every part of their vast dominions. And what was the result? Why, that the agriculture of Italy was destroyed—that 300,000 acres in the champaign of Naples alone reverted to a state of nature, and were tenanted only by wild boars and buffaloes, before a single barbarian had crossed the Alps—that the Grecian cities were entirely maintained by grain from the plains of Podolia—and the mistress of the world, according to the plaintive expression of the Roman annalist, depended for her subsistence on the floods of the Nile.* Not the corruption of manners, not the tyranny of the Cæsars, occasioned the ruin of the empire, for they affected only a limited class of the people; but the practical working of free trade, joined to domestic slavery, which destroyed the agricultural population of the heart of the empire, and left only effeminate urban multitudes to contend with the hardy barbarians of the north.

The advocates of free trade are not insensible to the superior advantages of the rising state over the old state in agriculture, and of the latter over the former in manufactures. On the contrary, it is a secret but clear sense of the reality of this distinction, which causes them so strenuously to contend for the removal of all restrictions. They hope, by so doing, to effect a great extension of their sales in foreign countries, without, as they pretend, creating any diminution in their own. But the views which have now been given show that this is a vain conceit, and demonstrate how it has happened, that the more strenuously England contends for the principles of free trade, and the more energetically that she carries them into practice, the more decided is the resistance which she meets from foreign states in the attempt, and the more rigorously do they act on the principles of protection. It is because they are striving to become manufacturing and commercial communities that they do this—it is a clear sense of the ruin which awaits them, if deluged with British goods, which makes them so strenuous in their system of exclusion. The more that we open our trade, the more will they close theirs. They think, and not without reason, that we advocate unrestricted commercial intercourse only because it would be profitable to us, and deprecate our old system of exclusion only because it has now been turned against ourselves. "Now, then," say they, "is the time, when England is suffering under the system of exclusion, which we have at length had sense enough to borrow from her, to draw closer the bonds of that system, and complete the glorious work of our own elevation on her ruins. Our policy is clearly chalked out by hers; we have only to do what she deprecates, and we are sure to be right." It is evident that these views will be permanently entertained by them, because they are founded on the strongest of all instincts, that of self-preservation. When we cease to be a great manufacturing nation, when we are no longer formidable rivals, they will open their harbours; but not till then. In striving to introduce a system of free trade, therefore, we gratuitously inflict a severe wound on our domestic industry, without any chance even of a compensation in that which is destined for the foreign markets. We let in their goods into our harbours, but we do not obtain admission, nor will we ever obtain admission, for ours into theirs. The reciprocity is, and ever must be, all on one side.

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* Tacitus, vol. xiv., p. 21; Michelet's *Hist. de France*, vol. 1, p. 317.

It is by mistaking the dominant influence among the continental states, that so large a portion of the community are deceived on this subject. They say, if we take their grain and cattle, they will take our cotton goods; that their system of exclusion is entirely a consequence of, and retaliation for ours. Can they produce a single instance in which our concessions in favor of their rude produce have led to a corresponding return in favour of ours? How can it be so, when, in all old states, the moneyed is the prevailing interest which sways the determinations of government? The landholders separated from each other, without the capital, almost all burdened with debt, are no match in the domestic struggle for the manufacturing and commercial interests. Their superiority is founded on a very clear footing—the same which has rendered the British House of Commons omnipotent. *They hold the purse.* It is their loans which support the credit of Government; it is by the customs which their imports pay, that the public revenue is to be chiefly raised. The more popular that governments become, the more strongly will their influences appear in the war of tariffs. If pure democracies were established in all the neighbouring states, we would be met in them all by a duty of sixty per cent. Witness the American tariff of 1842, and the progressive increase of duties against us since the popular revolutions we have fostered and encouraged in France, Belgium, and Portugal.

Is, then, a free and unrestrained system of commercial intercourse impossible between nations, and must it ever end in a war of tariffs and the pacific infliction of mutual injury? We consider it is impossible between two nations, both manufacturing, or aspiring to be so, and in the same, or nearly the same, age and social circumstances. It is mere folly to attempt it; because interests which must clash, are continually arising on both parts, and reciprocity, if attempted, is on one side only. With such nations, the only wisdom is, to conclude treaties, not of reciprocity, but of *commerce*; that is treaties in which, in consideration of certain branches of our manufactures being admitted on favourable terms, we agree to admit certain articles of their produce on equally advantageous conditions. Thus, a treaty, by which we agreed to admit, for a moderate duty, the wines of France, which we can never rival, in return for their admitting our iron and cotton goods on similar terms, would be a measure of equal benefit to both countries. It would be as wise a measure as Mr. Huskisson's reduction of the duties on French silks, gloves, and clocks, was a gratuitous and unwarranted injury to staple branches of our own industry. The only countries to which the reciprocity system is really applicable, are distant states in an early state of civilization, whose natural products are essentially different from our own, and whose stage of advancement is not such as to have made them enter on the career of manufacture, of jealousy, and of tariffs. Colonies unite all these advantages; and it is in them that the real sources of our strength, and the only secure markets for our produce, are to be found; but that subject, so vast, so interesting, so vital to our individual and national advancement, must be reserved for a future occasion.

Blackwood's Magazine, for February, 1844.

AGRICULTURE.

We select the following table, containing a summary of the principal crops of the several States of the Union, and a few items of practical information generally interesting, from the late able Report of Henry L. Ellsworth, Commissioner of Patents.

TABULAR ESTIMATE OF THE CROPS FOR 1844.

State or Territory.	Population in 1840.	Present estimated population.	Wheat. Bushels.	Barley. Bushels.	Oats. Bushels.	Rye. Bushels.
Maine,	501,973	555,525	628,000	260,000	1,422,000	176,000
New Hampshire,	284,574	289,368	588,000	117,000	1,765,000	405,000
Massachusetts,	737,699	803,187	210,000	141,000	1,687,000	660,000
Rhode Island,	108,830	115,033	4,000	49,000	182,000	49,000
Connecticut,	309,978	316,543	104,000	25,000	1,496,000	1,122,000
Vermont,	291,948	297,166	776,000	49,000	3,266,000	306,000
New York,	2,428,921	2,714,486	14,975,000	2,164,000	31,135,000	4,044,000
New Jersey,	373,306	401,295	875,000	10,000	4,271,000	2,569,000
Pennsylvania,	1,724,033	1,924,460	10,483,000	157,000	24,783,000	10,373,000
Delaware,	78,085	78,527	367,000	5,000	1,035,000	46,000
Maryland,	470,019	482,256	4,070,000	3,000	2,254,000	858,000
Virginia,	1,239,797	1,254,938	10,805,000	94,000	14,812,000	1,310,000
North Carolina,	753,419	761,648	2,461,000	4,000	5,346,000	255,000
South Carolina,	594,398	606,285	1,460.000	4,000	1,400,000	60,000
Georgia,	691,392	891,642	1,848.000	13,000	1,190,000	80,000
Alabama,	590,756	657,000	1,088,000	8,000	1,909,000	72,000
Mississippi,	375,651	556,467	344,000	2,000	1,081,000	20,000
Louisiana,	352,411	426,160	....	....	138,000	2,000
Tennessee,	829,210	907,770	6,950,000	5,000	7,841,000	366,000
Kentucky,	779,828	828,846	3,974,000	14,000	11,901,000	2,316,000
Ohio,	1,519,467	1,834,965	15,969,000	191,000	20,393,000	840,000
Indiana,	685,866	868,175	5,419,000	32,000	11,585,000	210.000
Illinois,	476,183	764,809	3,380,000	92,000	10,798,000	136,000
Missouri,	383.102	514,000	1,144,000	10.000	4,555,000	77,000
Arkansas,	97,574	133,403	2,111,000	1,000	396,000	11,000
Michigan,	212,267	308,437	4,237,000	158,000	4,013,000	70,000
Florida,	54,477	65,005	1,000	....	10,000	....
Wisconsin,	30,945	52,379	728,000	17,000	1,000,000	4,000
Iowa,	43,112	90,000	595,000	2,000	568.000	7,000
District of Columbia,	43,712	52,421	13,000	....	15,000	6,000
	17,069,453	19.552,196	95,607,000	3,627,000	172,247,000	26,450,000

TABULAR STATEMENT OF THE CROPS FOR 1844—CONTINUED.

State or Territory.	Buckwheat. Bushels.	Indian Corn. Bushels.	Potatoes. Bushels.	Hay. Tons.	Flax and Hemp. Tons.	Tobacco. Pounds.	Cotton. Pounds.	Rice. Pounds.	Silk. Pounds.	Sugar. Pounds.
Maine,	66,000	1,738,000	12,304,000	1,251,000	....	....	....	....	850	266 000
New Hampshire,	147,000	1,662,000	4,643,000	657,000	....	....	....	....	1,100	1,928,000
Massachusetts,	114,000	2,816,000	4,050,000	706,000	....	103,000	....	....	37,690	425,000
Rhode Island,	4,000	636,000	812,000	44,000	....	....	....	....	1,140	....
Connecticut,	404,000	2,408,000	2,117,000	573,000	....	661,000	....	....	176,210	47,000
Vermont,	286,000	1,440,000	6,158,000	1,266,000	....	....	....	....	10,990	4,383,000
New York,	2,997,000	19,468,000	17,703,000	4,938,000	....	....	....	....	6,540	12,135,000
New Jersey,	818,000	6,966,000	2,067,000	376,000	....	....	....	....	5,200	....
Pennsylvania,	2,889,000	19,029,000	6,871,000	2,182,000	....	486,000	....	....	33,100	1,313,000
Delaware,	12,000	3,014,000	194,000	23,000	....	....	....	....	4,580	....
Maryland,	99,000	4,653,000	881,000	80,000	....	582,000	6,000	....	8,530	....
Virginia,	....	38,960,000	2,374,000	444,000	....	33,574,000	2,683,000	3,000	7,720	1,407,000
North Carolina,	....	22,330,000	3,615,000	134,000	....	466,000	51,628,000	3,823,000	8,050	8,000
South Carolina,	....	13,640,000	3,360,000	31,000	....	53,000	49,700,000	83,616,000	6,930	28,000
Georgia,	....	22,200,000	2,048,000	22,000	....	163,000	213,620,000	17,524,000	7,660	291,000
Alabama,	....	22,200,000	1,923,000	21,000	....	310,000	140,000,000	200,000	7,170	9,000
Mississippi,	....	2,709,000	3.378,000	1,000	....	176,000	195,240,000	1,144,000	270	....
Louisiana,	....	7,600,000	1,443,000	33,000	....	....	154,800,000	4,705,000	1,310	160,000,000
Tennessee,	25,000	61,100,000	2,051,000	52,000	....	33,736,000	39,600,000	10,000	25,090	460,000
Kentucky,	13,000	47,500,000	1,371,000	164,000	12,000	57,555,000	880,000	19,000	5,810	2,447,000
Ohio,	792,000	48,000,000	4,847,000	1,876,000	1,000	6,888,000	....	....	31,500	4,380,000
Indiana,	66,000	24,500,000	3,573,000	2,027,000	500	3,200,000	....	....	1,050	7,365,000
Illinois,	86,000	19,680,000	3,095,000	350,000	300	1,062,000	250,000	....	4,250	542,000
Missouri,	17,000	12,500,000	972,000	90,000	9,000	12,495,000	180,000	....	260	396,000
Arkansas,	....	7,500,000	611,000	1,000	....	....	14,400,000	7,000	270	3,000
Michigan,	200,000	4,300,000	5,359,000	268,000	....	....	....	....	1,730	2,611,000
Florida,	....	1,100,000	300,000	2,000	....	195,000	9,120,000	708,000	510	373,000
Wisconsin,	23,000	560,000	853,000	67,000	....	....	....	....	30	216,000
Iowa,	13,000	1,690,000	469,000	34,000	....	....	....	....	....	74,000
District of Columbia,	....	44,000	51,000	2,000	....	....	....	....	1,250	....
	9,071,000	421,953,000	99,493,000	17,715,000	22,800	151,705,000	872,107,000	111,759,000	396,790	201,107,000

VALUE OF THE SILK CROP IN FRANCE.

Very little more than fifteen years have passed since there were in France only six departments in which there were extensive plantations of mulberry trees for the general rearing of silk worms; to these may be added sixteen others in which this cultivation was carried on, but on a limited scale, and in a precarious manner. Now, however, forty-two departments have taken up this profitable employment of time and capital; so that we have sixty-four out of eighty-six departments clothed with mulberry trees and producing silk in greater or less quantities. The present silk crop of France is said, on good authority, to be worth 160,000,000 of francs, or over thirty millions of dollars *Ellsworth's Report.*

What has become of the immense number of the morus multicaulis, for which there was such a rage in this country but a few years since?

Surely in our Southern States, where, the crop of cotton is exceeding all reasonable bounds, it would be well for some of its cultivators to look a little to the silk business.

Half the cotton now raised would yield as great an amount in returns as the present unwieldy quantity that is grown. *Editor.*

SILK RAGS MADE INTO NEW SILK.

A late number of the Quotidienne says that through the researches of the learned Professor Debzenne, the most useless portions of silk can now be transformed, through that gentleman's chemical *palingenesia* into new silk again for different articles. In the same way that caoutchouc, commonly called india rubber, is drawn out into filaments and woven into a durable material, so are these remnants of silk reduced into what is no more than its primitive state (viz: a glutinous paste) by means of a dissolvent; and silk, like fused glass, re-acquires on coming into the air all its original strength and tenacity. Having found the best dissolvent of the caoutchouc (the distillation of this elastic resin) Professor Debzenne was not deceived when he thought that he could distill silk, which he found to be the true medium for its dissolution. The crude silk and that which was not dyed was easily managed. The inventor at present has found no difficulty, but with the dyed portions of silk, and more especially the black ones; but he hopes by continuing his close attention to the subject to overcome this difficulty, and to relieve France from the duty of 70,000,000 francs which she pays to the foreigner for the means of alimenting her numerous silk establishments. We may certainly look upon the invention as one of the most valuable of the present century.

COTTON BAGGING.

An approximate estimate of Cotton Bagging manufactured in the year 1844 *throughout the Western Country.*

In Kentucky there are 500 hand looms in operation, each of which manufacture an average of 400 yards per week, or 200,000 per week.

	Yards.
500 looms at 200,000 yards each, gives per annum,	10,000,000
5 power loom factories at Louisville, Cincinnati, New Albany, and Maysville, produce per annum,	3,800,000
80 hand looms in Tennessee and North Alabama, produce an average of 15,000 yards each per annum,	1,200,000
50 hand looms in Missouri, produce	750,000
Total amount of cotton bagging manufactured in the West during the year 1844,	15,750,000

The average quantity of bagging used in baling cotton is six yards to the bale. Thus sufficient bagging is manufactured this year to cover 2,625,000 bales of cotton; which when added to the bagging lying over unused, from the work of previous years, is from 25 to 33 per cent. more than will be required for the coming cotton crop of 1844-'45, presuming it may reach the enormous amount of 2,500,000 bales.

CLARIFYING MAPLE SUGAR.

The samples of Maple Sugar surpass any thing of the kind we have seen; they were as white as loaf sugar; we have samples before us. The process of clarifying this sugar having been communicated to us, and it being both new and important, we give it to our readers. The liquor is strained and put into sheet iron pans under a stone arch and boiled; into three gallons of syrup, stir half a pint of milk and the whites of two eggs; then place it in a sheet iron pan on a stove until it boils, strain and boil it until it will grain, and then let it stand about six hours before it is drained. This drain is made with four pieces of board, converging to a point, the molasses drains off at the bottom; a wet flannel cloth is kept on the sugar three days. This is the recipe by which the young lady (Miss White) perfects the process of clarification.

Large quantities of this sugar are made in Pennsylvania, New York, Vermont, Ohio, and Indiana.

SUGAR CROP OF 1844.

We give the following recapitulation of the quantity of sugar made in Louisiana, in the crop of 1844, from the report of Mr. Ellsworth. Some persons have rated the crop much larger, but this is the only account in which the several parishes are stated, and is most probably nearly correct, though it should be taken only as an approximate statement. Some have gone as high as 150,000 hhds., while in the Tabular Statement of the crops, Mr. Ellsworth has taken about the mean, say 133,333 hhds., of 1,200 pounds each.

	Hhds.
St. Mary's Parish,	15,311
Ascension Parish,	10,633
Iberville Parish,	9,644
St. James Parish,	9,350
Lafourche Interieur,	6,732
Placquemines,	6,641
Teorebonne,	6,366
Assumption,	6,256
St. Charles,	5,822
St. John the Baptist,	5,743
Jefferson,	5,453
West Baton Rouge,	3,087
St. Martin,	2,621
East Baton Rouge,	2,334
St. Bernard,	2,026
Lafayette,	908
Orleans,	778
St. Landry,	395
Point Coupee,	246
Total,	100,346

NOTICES OF NEW BOOKS.

A Dictionary of Practical Medicine, comprising General Pathology, the nature and treatment of Diseases, Morbid Strictures, &c. By James Copeland, M. D., F. R. S. Edited, with additions, by Charles A. Lee, M. D. New York: HARPER & BROTHERS, 1845.

The sixth number of this valuable periodical has just issued from the teeming press of the Messrs. Harpers, to which the public are so much indebted for works of science. The "work contains the opinions and practice of the most experienced medical writers, British and foreign, digested and wrought up with the results of the author's experience, during a period of over thirty years; presenting a diversified range of opinions, methods of cure, and authorities not to be met with elsewhere. It also contains a full exposition of the general principles of Pathology, and a minute description of the organic lesions of the human body, and a detailed account of those states of disorder incidental to the sex, the different periods of life, and to particular climates." The contents of No. 6 are:—Dropsy of the Abdomen, Dropsy of the Annion, Dropsy of the Cellular Tissue, Dropsy of the Chest, Dropsy Congenital, Dropsy Encysted, Dropsy in the Head, Drunkenness, Duodenum, Dysentery, Dysmenorrhœa, Dysphazia, Dyspnœa, Dysuira, Ear noises in the, Ear-ache, Ear inflammation of the, Ecstasy, Exthyma, Eczema, Elephantiases, Emphysema.

The Blind Girl, with Other Tales. By Emma C. Embury. New York: Harper & Brothers, 81 Cliff street. 1845.

The reader of this little volume will rise from its perusal with unfeigned gratification. The story of the Blind Girl is a touching narrative, and well calculated to teach the value of submission and resignation under the most afflicting of maladies. The other stories in the volume have a good moral, while they are full of interest, and do great credit to Mrs. Embury, as a writer for the instruction of juvenile readers.

Married and Single; or, Marriage and Celibacy Contrasted, in a Series of Domestic Pictures. By T. S. Arthur, author of Sweethearts and Wives, Lovers and Husbands, &c. &c. New York: Harper & Brothers. 1844.

The domestic pictures here displayed, are well painted; they have their light and shade, and it is well contrasted, so as to elucidate the subjects treated of. The views presented by them, happily illustrate the difference between the end of the life of a virtuous pair fondly attached to each other, with a family of children around them, and a bachelor, who, though attached in early life to a deserving woman, avoids the matrimonial tie, lives a life of selfishness, and ends it with remorse.

Tales and Sketches. Second Series. By the author of Hope Leslie, Letters from Abroad, &c. &c. New York: Harper & Brothers. 1844.

These Sketches are collected from the various magazines in which they were first published, and consist of Wilton Harvey, Cousin Frank, A Day in a Rail Road Car, Daniel Prime, A Huguenot Family, The Post Office, A Vision, Second Thoughts are Best, and Our Burial Place. Those of our readers who know the happy and familiar style of the authoress of Hope Leslie, need not be told how natural and instructive are the incidents with which her stories are replete. And those who do not, should avail themselves of these Sketches, full of the moving incidents, pure morals, and correct delineations of the many chequered scenes of human life.

A History of Norwich, Connecticut, from its Settlement in 1660, *to January,* 1845. *By Miss F. M. Caulkins.* Norwich: Thomas Robinson. New York: D. Appleton & Co.

This is a well drawn up sketch of one of the ancient towns of New England, showing the vicissitudes through which the place has passed, as an agricultural, commercial and manufacturing town, and the influence which the pursuits of industry have had on its prosperity, in war and peace.

An Encyclopædia of Domestic Economy, comprising such subjects as are most immediately connected with house-keeping: as the construction of domestic edifices, with the modes of warming, ventilating, and lighting them; a description of the various articles of furniture; the preservation of health, domestic medicine, &c. Illustrated with nearly one thousand engravings. New York: Harper & Brothers. 1845. *To be completed in twelve numbers.*

This useful publication, full of engravings, has reached its second number; each number contains 136 pages of valuable information, such as every house-keeper should possess; and all for the remarkably small sum of twenty-five cents. We should think no purchase which could be made would afford as much entertainment and knowledge for double the sum.

Elements of Rhetoric and Literary Criticism, with copious practical exercises and examples for the use of Common Schools and Academies; including also a succinct history of the English Language, and of British and American Literature, from the earliest to the present times—On the basis of the recent works of Alexander Reed and Robert Cornell; with large additions from other sources. Compiled and abridged by J. R. Boyd, A. M., Principal of Black River L. and R. Institute. New York: Harper & Brothers. 1845.

In his preliminary observations, the author states his objects to be—"To train the young mind to think, and to be able to give a perspicuous, forcible, and elegant expression to thought in a written form. Also to cultivate the taste, the judgment, the imagination;" and this we think he proposes to do in the best possible manner, by the best rules and copious practical examples, from the best authors, both in prose and verse, progressively from the most simple to the most difficult. We have seen many books having the same object in view, but none better calculated to attain the end proposed than this book of Mr. Boyd, which, though small in size, is really copious and clear.

The Literature of Political Economy: A classified catalogue of select publications in the different departments of that science, with historical, critical, and biographical notices. By J. R. McCulloch, Esq. London; Longman, Brown, Green, & Longmans. 1845.

This is a most valuable work, containing, as it does, an immense amount of information respecting writers and works on the various branches of political economy, which is nowhere else to be found, and which perhaps no one is as competent to afford to the public as Mr. McCulloch, from his extensive researches on the subject, which were required for his own numerous publications. The reader will in this volume find carefully classified and arranged, the titles of a great variety of works by about eight hundred authors in different languages, with notices of many of them, and the time when, and occasion on which they were written, with the whole well indexed; thus furnishing an important guide to inquirers on subjects connected with national policy, industrial pursuits, or statistics.

As might have been expected, the critical notices by Mr. McCulloch are strongly imbued with his dogmatical notions on free trade, and hostility to protection. Taking Adam Smith and Ricardo as models for writers on political economy, he denounces in an unsparing manner the doctrines of writers in all languages who belong to another school. The reader who is aware of the strong bias and prejudices of the learned compiler of this work, will be often amused at his remarks and the tenacity with which he holds to his free trade ideas on all occasions. Take for example his notice of Alexander Hamilton's Report on manufactures, presented to the Congress of the United States in 1791. Mr. McC. says: "This is a well drawn up *resume* of the arguments in favor of the mistaken policy of encouraging manufactures applied to the case of America. But without taking up the time of the reader by entering into any detailed exposition of their sophistry and fallacy, we may shortly observe that it would have been well for the United States had they rejected Gen. Hamilton's advice, and left manufactures to grow up in the Union as they would have done, without any artificial encouragement, according as the circumstances of the country enabled them to be carried on with advantage. All that she has realized by her attempts prematurely to stimulate their growth, has been a heavy loss. Indeed all those manufactures for which the country is adapted and which may be carried on without loss to the public are injured by the protective saystem." (We do not find that Mr. McCulloch any where shows how and in what instance manufactures have "grown up" without protection.)

The following notices will be equally amusing to Americans:

"An examination of the new Tariff proposed by the Hon. Henry Baldwin, by one of the people. (—— Cambreleng, Esq.) New York, 1821. This is a well reasoned conclusive tract."

"Report of the Committee of the House of Representatives of the 8th of February, 1830, on Commerce and Navigation. (Drawn up by Mr. Cambreleng.) A forcible exposition of the mischievous influence of the restrictive system."

On an essay by his countryman, Mr. Alison, (author of the History of Europe, &c.) entitled "Free Trade and Protection." Being a Tract on the Necessity of Agricultural Protection," our author remarks, "Mr. Alison has very greatly exaggerated the advantages conferred on agriculture by the Corn Laws. Indeed it is very questionable whether it would be sensibly injured by their repeal. That such would not be the case is certain, unless the repeal of the Corn Laws were to be followed by a very heavy fall of prices. But no evidence has been, or can be, produced to show that their repeal would have any such effect." [Here we would respectfully ask Mr. McCulloch how "*cheap bread*," (which is the cry of the Free Trade men in England,) is to be obtained by a repeal of the Corn Laws, if a heavy fall of prices is not to follow such repeal? It will, we think, be some time yet before the agriculturists of Great Britain will agree with him as to the effects of free trade in corn.]

Notwithstanding Mr. McCulloch's free trade doctrines, we heartily thank him for this book, and we think all inquirers and statesmen who seek for information, on both sides of the Atlantic, will cheerfully join us in the obligations all are under to him for his researches.

END OF NO. I.

THE

NATIONAL MAGAZINE

AND

Industrial Record.

VOL. I. NEW YORK, JULY, 1845. No. II.

THE PROGRESS OF THE AGE.

THERE is, perhaps, no subject which presents to the philosophic mind a wider and more fruitful field for agreeable and useful reflection, than the origin and progress of communities and the developement of their intellectual and physical resources. "The proper study of mankind is man," and whether we regard our race in its primitive condition, or trace it through the infinitely diversified changes wrought by time and circumstances, its history is alike replete with instruction. Endowed by his Maker with an intelligence denied to the inferior portions of creation, and gifted with the capability of making them available to his comfort and well being, man stands pre-eminent as the masterwork of the great Power to whom he owes his existence. Springing, as we are taught to believe, from one common source, the human family has extended, and is extending, itself over the whole earth, spreading the blessings of civilization and refinement wherever the products of nature furnish the means of subsistence to its members, or present a field for the exercise of their wonder-working talents. In his primitive or savage condition the wants of man are confined principally to the gratification of his animal feelings; but as societies are formed new relations arise, which tend to stimulate his energies and afford almost boundless scope to his ingenuity. It would be useless here to discuss the question whether increased happiness has attended this multiplication of relations, as the point must, after all, depend upon the circumstances in which individuals or communities are placed. It is sufficient to know that in the endless varieties of animate and inanimate creatures, the Deity has formed so many subjects on which man may exercise his physical, intellectual and moral energies for some good end, and that without such occupation he would fall far short of fulfilling his high destinies. To imagine, for an instant, that the mineral, vegetable and animal kingdoms were created for the purpose of remaining in their natural state, would be to do injustice to their great author and offer violence to the dictates of common sense. The Almighty has placed in the vast laboratory of nature the elements of comfort to our race, and, whatever may be the ill effects consequent on the misuse of these materials, there can be no plausible doubt that the occupation afforded in applying them to the diversified purposes of civilized life, produces contentment to ourselves and encreases the happiness and enjoyment of others. Nor does this remark apply to individuals alone. Nations made up, as they are, of human beings, possessing kindred sympathies and actuated by kindred motives, are alike dependent on the proper improvement of the natural advantages they may possess for prosperity and greatness. They have their infancy, their prime, and their old age, and as in the material body, strength and longevity depend upon due attention to the laws of the animal economy, so do bodies politic acquire power, expansion and durability from the developement of the resources placed at their disposal. If, for instance, a man be indolent and fail to provide for his wants, unless through the assistance of others, he becomes dependent on these extraneouss aids, and when deprived of them, falls into utter helplessness, whatever may have been his natural endowments. So it is with communities. If nations, however varied may be the natural products of their soil and genial the climate in which they live, find their only support in the supplies furnished by sister nations, in the necessary course of events, they too must become indebted to foreign help for all that they possess, and should circumstances produce the withdrawal of the supply from without, must fall into ruin and become the victims of their own remissness and idleness.

Of the correctness of the above observations history furnishes, perhaps, no more appropriate nor convincing illustration than that which is to be found in the downfall of the Roman Empire, the most magnificent social and political structure that the world has ever known. I am well aware that the decay and dismemberment of this great union of nations under one controlling influence, has been traced to the enervating effects of climate and the indolence attendant on wealth. However these circumstances may have contributed to the great result, they are not to be regarded in any other light than as a portion of the effects produced by some more powerful remote cause. This cause was, as is believed, none other than the failure on the part of the Roman people to cultivate and improve the natural advantages with which they had been favoured in a most extraordinary degree. It will be remembered that the Romans, properly speaking, although possessed of a soil of most surprising fertility and in the enjoyment of one of the finest climates in the world, were dependent for most of the necessaries and luxuries of life on the nations which had been forced to submit to their warlike sway. The inhabitants of the imperial city were indebted to the more distant provinces of the empire for the products of the soil as well as the articles fashioned by the hand of man for elegance or necessary comfort. In them the farmers and artizans of tributary kingdoms found ready purchasers of the results of their toil and ingenuity, and thus became in fact the masters of their conquerors.

The agriculture of Italy fell into ruin, and her work shops gave way to places of amusement which, whilst they gratified the taste and flattered the self esteem of the masters of the world, deprived them of the ability of retaining the power which their predecessors had acquired in many a bloody conflict. Roman virtue and simplicity, so long the theme of the world's praise, were no longer to be met with, but in their place stood Roman indolence and luxuriousness.

In the meanwhile many of the *barbarian nations*, as in Roman vanity they were indiscriminately called, subject to the imperial yoke, continued, under the protection of the Roman Eagle, to cherish industry and promote the arts, as affording the best, if not the only, means of satisfying the frequent demands of their conquerors. Thus whilst the mistress of the world became the patroness of the arts in gratifying her own ambition and procuring the means of indulging her own sensuality, she was unintentionally laying the foundation of future greatness for the very nations which her rapacity was, for the moment, calculated to impoverish. To meet the subsidies demanded by their rulers and the exactions of those in power, recourse was had, as a matter of necessity, to the ingenuity which could convert the raw material, placed at their disposal by the hand of nature, into articles suited to the convenience or the pleasures of those who were too proud and too indolent to devote themselves to pursuits involving bodily or mental exertion. To be a Roman citizen and distinguished for military prowess was the highest dignity to which the countryman of Cæsar could, or ought, in his own opinion, to aspire, and to mingle in mechanical operations, was a degradation to which a son of the imperial city could not submit.

The consequence of such a state of things was inevitable; for as well might we expect to see a healthy natural body without a regular circulation of the blood through the heart, as to behold a vast empire kept in a prosperous condition when the fountain head of power, whence the controlling influence emanates, does not possess within itself the elements o its own greatness and durability. Rome, instead of being the source o supply, became in the course of time, the recipient of the products of the industry of her provinces, and in so doing was made tributary to the very people over whom she desired to exercise political sway. In the place of receiving the money of the tributary nations, to be retained and made the means of rewarding and promoting Roman industry and Roman ingenuity, she became the mere conduit through which the treasures, drawn from the various parts of her empire, flowed back again to the sources whence they were derived in the form of payment for the necessaries and luxuries of life which those portions furnished. Thus deprived of its proper nutriment, and drained of its means of subsistence, the controlling power of the empire became languid, and its energies were paralyzed to such an extent, that it could no longer hold in subjection the nations whose weakness had made them the victims of military prowess. Communities which, in their more savage state, had been unable to resist the armies of Rome, had acquired a *moral* influence, before which those armies became powerless. It was the might of mind opposed to mere physical strength, the force of human intellect adapting itself to the demands of human necessity. What were the armies of Rome without the means of clothing and subsistence? and what was the shadow of power after the reality had been taken away? The once fertile fields of Italy had become barren, and the work shops of her artizans and manufacturers had been torn down and destroyed, to make room for the gorgeous palaces and places of amusement that now stand forth as melancholy monuments of her former splendour. The garden of the old world, has now become the seat of pestilence and decay, and where the *toga* once fluttered to the breeze, the proud emblem of Roman citizenship, the tattered garments and squalid faces of a beggared people tell the sad story of Roman degradation. Ask the Italian of the nineteenth century for the monuments of his country's former greatness, and he points you to ruins, which frown upon the wretches to whom they afford a miserable shelter. Ask him of her present condition, and his answer will be an appeal for charity. Such has been the fate of the once-proud mistress of the world. What a warning does it not afford to nations, which, instead of cultivating their internal resources, and becoming the possessors within themselves of all that is required to constitute true national greatness and independence, would rely on the industry of strangers, and thus be the fosterers of foreign enterprize at the expense of their own permanent prosperity.

Numerous other examples of the ruinous consequences of a want of attention to the increase and developement of internal national resources, by the promotion of ingenuity and enterprize, are to be found in ancient history; but it is deemed unnecessary to go into further detail to establish a proposition which is sustained by all experience. Of the correctness of the converse of this proposition, as applied to more modern times, ample proof will be found in the history of Great Britain, once an humble dependency of the gigantic power of her Italian masters.

It may here be remarked that national power and national refinement do not depend on mere extent of territory, and that a nation's strength consists not so much in the quantity of its soil as the manner in which the vegetable and mineral products of the earth are made available to the purposes of mankind in a state of civilization. So far from constituting the basis of power, widely-spread territory, without the proper application of enterprize and ingenuity, becomes a source of weakness, owing to the multiplication of conflicting interests which it must necessarily bring along with it. Of this conflict of interests the only true corrective is to be found in the mutual interchange of commodities that must take place between the various sections of country in which they are found, reference being had to the respective wants of each: and the more that mutual convenience can be thus promoted, the more united and consequently the more powerful will a nation be. Of this combination of interests producing unity, we find a most striking instance in the nation of which we have just spoken. A mere speck in the ocean, so far as territorial limits are concerned, and containing fewer square miles than any one of several of the States of our Union, England has succeeded in placing herself within a century past, simply by the proper direction of her industry and the judicious protection extended to her producing classes, in a controlling position among the nations of the earth and making them, in spite of themselves, tributary to her greatnsss. By becoming the workshop of the world she has been enabled to exert an influence which nothing could resist; it is the power behind the throne greater than the throne itself.

If we look back a century, we behold Great Britain occupying a second or third rate station among European powers. At the time of which we speak, her commercial marine was comparatively insignificant, whilst her naval power was far inferior to that of several other European nations. In the department of manufactures, she was indebted to the people of the continent for many of the necessaries of life, for which she had little to give in return, and consequently was forced to become their debtor, whilst her domestic industry and enterprize, having no adequate stimulus to put them into action, were unproductive. As an agricultural nation, she had to contend with a climate very far inferior, in point of productiveness, to those enjoyed by other countries, whilst the density of her population was such, as to consume all, or nearly all, of her vegetable and animal productions. With a limited supply of the necessaries of life at home, and almost no surplus to offer in exchange for what she might require from abroad, it is easy to see that her influence as a nation must have been excessiveiy limited. Fortunately for her, the antagonist position in which she was placed with other powers, by circumstances beyond her control, rendered the adoption of a protective policy, as it is termed, a measure of imperative necessity. Whilst engaged in war, she could not procure the fabrics of those nations with which she was contending, and the only alternative left, was to look to the ingenuity of her own people for a substitute for them. The necessity thus imposed of being her own provider, however painful at the time, and objectionable to the agricultural portion of her subjects, has not only become the source of her present overwhelming power, but has been the origin of incalculable wealth, even to those by whom it was deplored. During the last three quarters of a century, England has pursued a policy which has not only provided for her own wants, but has made her the creditor nation to the whole world, notwithstanding all the disadvantages of her climate, and the fact that for the most important articles of her manufacture, she has been obliged to import the raw material from distant parts of the globe. Her wealth, has been, *her labor* applied to the various branches of industry under the fostering care of the Government—a care rewarded by results which have exceeded, beyond all calculation, any anticipations that could have been entertained. The opponents of this truly *British* policy, for such has been the course pursued, almost without duration, by the powerful nation of which we speak, will find a most striking and convincing proof of the truth of what has been said, in the fact, that in 1785, the whole of her cotton manufacture was valued at £960,000 sterling, whereas, in 1814, it amounted to £29,000,000 sterling, and in 1820, thirty-seven years afterward it was estimated at £43,500,000 sterling, making an increase of about $212,700,000, in the short space of thirty-seven years, nor have the other branches of industry suffered by this vast increase. It is stated on good authority, that whilst in 1783, the woollen manufacture was valued at £16,800,000 sterling, in 1811, twenty-seven years afterwards, it amounted to £26,000,000 sterling, or about $50,000,000 increase. There is every reason to suppose that a similar improvement must have taken place in the other departments of the arts, when it is borne in mind that, nothwithstanding the efforts made by the continental powers within the last thirty years, to make themselves independent of British fabrics, there is not a spot on the globe where those fabrics are not sold, and where British influence is not felt. Bonaparte, it is said, in the fullness of his spleen, called the English "a nation of shop-keepers," and affected to despise a people devoted to commerce and manufactures; but it was to this same *nation of shop-keepers*, and the treasures which its industry drew from all quarters of the earth, that the world is indebted for the successful resistance made to the ambitious plans of that fearful, but wonderful man. The advance of elegance and refinement has kept pace with the improvements in the arts; science and literature have flourished to an extent previously unknown, and genius, in whatever way exercised, has reaped a rich harvest.

From this protective policy of Great Britain, there have been as previously intimated some apparent deviations. Some of her statesmen perceiving, that other nations, had become somewhat jealous of her power and were commencing to turn their attention to foster and protect industry, England having reached a perfection in the manipulatory processes which gave her the supremacy, looked over their tariff of duties, and struck off from it a number of restrictions which had long since become a dead letter. Among these statesmen stood pre-eminent, Mr. Huskisson, than whom no man was more careful not to interfere with the capital, skill and labour of Great Britain.

Most of the nations of Europe had, as I have said, been for some time aware of the beneficial effects of English policy in behalf of her own industry, and were too wise to be caught by professions so obviously dictated by selfish views.

However the policy marked out by Mr. Huskisson and his political followers may, in their own opinions, have been adapted to the condition of England, far as she was in advance of other nations in point of manufactures, those gentlemen must have been short sighted, indeed, not to have been aware that other nations would probably learn wisdom from Britain's experience, and be led to think that the course so successfully pursued by her, would be attended by similar good results if practised by themselves. Immediately after the long war, which terminated with the downfall of Napoleon and the restoration of Continental Europe to something resembling its former condition, the arts of peace began to be encouraged, and each country found out that the only way to become truly powerful, was to be dependent on itself alone for whatever was requisite for national comfort. On the consequences likely to accrue to England from this general adoption of *her cherished* policy, by other nations, it is unnecessary to dilate. The wisdom of her statesmen has, as experience shows, taught them to find new markets for her manufactures, and the time is yet very far distant when, with the rapid improvements in machinery and the wealth she has accumulated, England will be deprived of the new markets that have been opened to her commodities. The reader of these observations will, however, observe a most striking difference which presents itself between the condition of the Roman Empire at the time of its downfall, and that of the empire of Great Britain on which, it is said, the sun never sets. In the case of the Roman Empire, decay was consequent upon the want of self-dependence and a corresponding reliance on strangers; whilst in that of Great Britain, ruin and disaster, should they come, must be referable to some other cause. Stripped of her colonial possessions and foreign markets, England would still retain within herself the capability of self-subsistence. The energies of her people have not been paralyzed by slothfulness, and in their active industry she would find the sheet anchor of her safety.

It must not be supposed that the author's object, in the foregoing remarks, has been to eulogize Great Britain. In tracing the progress of society, he has endeavoured, however imperfectly, to ascribe effects to their real causes, and if, in so doing, he has incidentally been led to express an opinion too favourable to our mother country, it is to be understood as applying particularly to the wise policy pursued by her government in protecting her home industry—a policy that can alone make a nation permanently prosperous and happy. If there be a country on earth, in which the refinements of life are carried to their highest point, it is in England, where the means of indulgence are unbounded, and where, with many, pleasure is made *the business of life*. Should the question be asked, whence are these means derived it, is answered, from the *national labour*, which, with a power like that of the wand Midas, turns every thing it touches into gold. Without this labour, her iron, coal, tin and copper, would be useless, and her wool, which now affords sustenance to millions, would be comparatively valueless. It is the wealth that comes unearned to a nation that does harm, and not the riches that are the results of honest industry. What have the mines of the southern portion of our own continent been to Spain but the sources of idleness and crime, and consequently national degradation?

Instead of enriching the laborious and frugal, and in this way holding up a prize to honest effort, they have paralyzed exertion by rendering it unnecessary. When we look at that unhappy country as it exists at the present day, it is difficult to believe that its population is descended from the gallant stock that peopled it some centuries ago. Distracted by civil and political dissensions and made the easy prey of desperadoes and intriguers, it presents to us a fearful example of the effects of money as a gift, not a reward for honest pains-taking industry. Idleness and sloth accompanied by their train of attendant vices, have swept over the land, with a desolating influence, leaving penury and distress where once were the abiding places of contentment and happy toil. Nor are the present possessors of these sources of treasures any better off. Grasping at an independence which they cannot appreciate, we find them the constant victims of their own wild passions, and the willing instruments of petty tyranny, prepared for any excess that fanatacism or reckless ambition may propose. Without the lights of education these benighted people vainly imagine themselves *free*, when they have only changed the names of the tyrants by whom they are governed, and are content to live on, the degraded slaves of cisatlantic, instead of European, masters. When the first blow was struck that severed the chain which bound the descendants of the Incas to the car of a transatlantic despot, humanity rejoiced, and welcomed it as the herald of their freedom, civil and religious; how far these fond anticipations have been realized, let sad experience tell.

Let us now turn to the progress of society in our own country. A little more than two centuries have now elapsed since our forefathers sought an asylum upon our shores. Self-exiled for opinion's sake, they abandoned the graves of their ancestors, and came to build an altar to their God amid the wildernesses of the western world. Unambitious and simple in their habits, they only sought for freedom from persecution and permission to enjoy the earnings of their labour in their own quiet way. Years rolled on, and the nucleus of a mighty nation was formed; a nation destined at no distant period to present to the world the curious spectacle of a self-governed people, a people subject to self-imposed laws. It was not long, however, before the eye of power cast its rapacious glance upon these happy communities, and the mother country resolved to appropriate to itself the earnings of their enterprize and industry. Meek and unpretending, our ancestors had borne penury, privation and exile; they had submitted with unfaultering fortitude to all the ills attendant on the first settlement of a new country, in the hope that the products of their unaided efforts would be their own. The hour had arrived, however, when further endurance would be servility and non-resistance a cowardly abandonment of right. They pledged their property, their lives and their sacred honours in support of freedom's cause, and well did they redeem their pledge. Through perils, dangers and death, they bore aloft the flag of liberty, until at length an admiring world hailed the North American Colonies of Great Britain as free and independent states.

In tracing the progress of the age in our own country, it is proper to bear in mind that the first European settlers on this continent were already far advanced in the knowledge of the useful arts. The greater portion of them had been induced to visit the western hemisphere solely to avoid the religious intolerance which forbade them to worship their maker, except in accordance with a prescribed formula, and arrogated to itself unlimitted control over the consciences of men. So far as their ordinary pursuits were concerned, they brought with them the knowledge previously acquired, and thus contributed to the stock of information of the new communities. They were not, however, as in the case of the Roman colonies encouraged to become the suppliers of their fatherland; the policy of which was to make the more distant portions of the empire tributory to itself; consequently we see that, for very many years, these colonists derived their supplies of manufactured articles from the parent country, and thus aided in supporting a government in the administration of which they had no voice. Up to the period of the revolution and long since its termination, manufactured articles intended for domestic use, as well as implements used in husbandry and mechanical pursuits, were nearly all made in British workshops. Even ordinary wearing apparel, such as hats, boots, shoes, &c., was imported and nearly the whole of the profits arising from cultivating the American soil went to sustain the very government by which the American colonists had been driven into exile. It was a matter of comparatively minor importance to Great Britain *where*, the consumers of her commodities lived, or by what national cognomen they were distinguished, provided that she continued to be the party benefited, by the market they afforded to her artizans and manufacturers. Affairs remained pretty much in this condition until the war of 1812, which had, at all events, the salutary effect of making our people look to the promotion of the mechanical arts among themselves. The embargo and non-intercourse acts, so ruinous to the commerce of our country, had the redeeming quality of teaching Americans to work up there own raw material, and establish at home a market for the products of their own industry. Strange as it may seem, when the war of which we speak commenced our soldiers and sailors were clad in the fabrics of their enemies, and fought their opponents with arms made by those opponents themselves. Among the more wealthy classes it was thought derogatory to wear any other than British or French clothes, whilst even the gunpowder imported from abroad was deemed the most effective agent in supporting the honour of the American flag. It was owing to this cause that there were found among us many who were opposed to a conflict with Great Britain, even in support of our rights, because it necessarily produced an interruption of the further supplies of her manufactures and enhanced the prices of those that were already in the country. The merchant, whose ships were made valueless by being kept moored at our wharves, and the agriculturist, whose cotton, wheat, tobacco &c., were permitted to rot in our own store houses, saw no good reason for their being deprived of their accustomed markets, and felt the inclination which interest always produces, rather to submit to national dishonour than forego the gains to which the wars in Europe had given rise. In counting the loss of present profits, they would have disregarded the ulterior and more permanent advantages likely to accrue from a state of things which, by making us independent of foreign supplies, would prevent any recurrence of the evil. Nor was this the only mischief to which a dependence on foreign countries had given rise. The condition of Europe, for many years previous to the last war between this country and Great Britain, had been such as to throw into our hands as a neutral power the carrying trade of nearly the whole world, and had opened markets every where for the sale of our agricultural products at the most exorbitant prices. The continental powers had been forced to convert the ploughshare into the sword, and make soldiers of the tillers of the soil. Harassed to death by the ravages of war, and having their fields laid waste and their crops destroyed by the desolating march of the troops of their enemies, or the scarcely less ruinous progress of the armies of their own rulers, the people of Europe were obliged to buy from us breadstuffs and other articles of subsistence, at whatever prices we might think proper to demand. This condition of things, whilst it gave a temporary appearance of prosperity to our agricultural interest, was preparing the way for the revulsion which ensued on the downfall of Napoleon, and the re-establishment of a general peace. So soon as that event took place, affairs assumed a new aspect and the American agriculturist was surprised to find that his wheat no longer brought him two dollars and a half per bushel, nor his flour twelve, fourteen, or more dollars per barrel. And why was this the case? Simply because Europeans were enabled to become their own producers. Fields long unproductive were now clad with abundant harvests, and honest, peaceful toil again resumed its ascendancy.

At the end of the war of 1812 the salutary effects of the exclusion of foreign manufactures upon our own producing interests, had begun to make themselves most sensibly felt. In New England and the middle and western states, large cotton and other factories had been established and, aided by the "incidental," to use a favourite expression of modern politicians, protection of *necessity*, the manufacturers of the country were in a highly prosperous condition. A home market had been established which gave them ample returns for their labour. The restoration of peace was the forerunner of ruin, in as much as it not only opened our ports to the introduction of foreign manufactures, but enabled our European rivals to undersell us, owing to the cheapness of labour consequent on the disbanding of their armies, and the employment of steam power in the various processes of manufactures. The *men machine*, who had been in the habit of receiving a few pence a day for risking their lives and enduring every vicissitude of climate, poorly fed and worse clothed, were glad to toil in peace and quietness at any price, however small, and could afford to underwork the honest and intelligent yeomanry, of a new, prosperous and productive country which presented an unbounded field for enterprize. It was to counteract this re-action, so adverse to the American workman, that the friends of our national industry found it necessary to establish the tariff of 1816, which was intended to afford a return to the producer of the raw material and to enable the mechanic to sustain himself in a condition worthy of an independent freeman and intelligent moral agent.

It may be proper here to advert to the erroneous views of those among our countrymen who, with a short sighted policy, would place the producing classes of America on the same footing with the labourers of other countries. Whilst our fellow citizens above referred to, are proud to admit the superiority of our people in point of intelligence, they insist that they should perform the same services with foreigners at the same prices, because, say they, the advantages they possess in having the raw material at their doors should be a sufficient protection. Again, whilst they concede the propriety of sustaining the moral tone of our people, they are unwilling to be, as they allege, the *only contributors* to that end. A ready answer is found to both of the above objections in the simple fact, that the producer of the raw material is himself the chief beneficiary of any good result arising from the elevation of character and consequent exaltation of the workman in society. Let us suppose, for instance, that the labouring classes in this country were fed and clothed in the same manner as the labouring classes in Europe, and what would be the result? It cannot be denied that consumption of all articles will always be in proportion to the wants of the consumer; or in other words, that the extent of demand will depend on the quantity required. Now, if we compare the condition of the operatives of Europe with that of the working classes in our own country, we cannot fail to be struck with the surprising disparity between them. In Europe the peasant or mechanic, owing to the low price of his labour, can only afford to procure the bare necessaries of life. His clothing is of the coarsest material, preserved with the greatest care, and generally kept in use so long as decency will permit. His board is scantily suppled with the plainest fare, confined usually to vegetable productions of the cheapest kind, and as for the comforts or luxuries of life he scarcely knows the meaning of the term. It necessarily follows that the consumption of such a family is small in proportion to the scantiness and plainness of the provision made for it, and bears no comparison whatever to that of any working man in this country, where, owing to the value of labour, the poorest, if industrious, can obtain good clothes and a plenty of food of all kinds. Now whether is it better for the agriculturist, be he cotton planter or grain grower, to have a market furnished by the latter, or former, of the above description of consumers? In addition to this, if the moral elevation and exemption from the necessity of committing crime, on the part of the American consumer be taken into the account, it must be conceded that in opposing the protection to the mechanical arts, the grower of the raw materials is warring with his own best interests.

The assumption so often made, that duties imperatively required for the purposes of the treasury, are favours conferred on the manufacturers, is erroneous, inasmuch as the increase of manufacturers, is in fact nothing more or less than a rateable advancement of the wages of labour, and of the agricultural interest of the country. In a calculation which has come under our notice, based upon the prosperous condition of our manufacturing interest in 1815, it is shown that allowing the number of persons dependent upon manufactures to have been 3,000,000, they afforded at the lowest estimates to their agricultural bretheren a market for the raw material used for subsistence and manufacturing purposes, of no less a value than $177,000,000:

Dr. Franklin, whose authority on such subjects will be admitted by all; with reference to cherishing internal national resources says:

"*Industry in all shapes in all instances and by all means*, should be encouraged and protected; indolence by every means rooted out.

Some European nations prudently refuse to consume the manufactures of the East Indies. They should likewise forbid them to their colonies; for the gain to the merchant is not to be compared with the loss, by that means, of people to the nation.

Foreign luxuries and needless manufactures, imported and used in a nation, increase the people of the nation that furnishes them, and diminish the people of the nation that uses them.

Laws, therefore, that prevent such importation, and, on the contrary, promote the exportation of manufactures to be consumed in foreign countries, may be called (with respect to the people that make them) generating laws, as by increasing subsistence they encourage marriage.

Such laws likewise strengthen a nation doubly, by increasing its own people and diminishing its neighbours."

In selecting a form of government, our forefathers, instructed by their own sorrowful experience, were determined to avoid, as far as practicable, any system that would confer on one portion of the community privileges greater than those enjoyed by others. They had felt the unhappy effects resulting from the Union of Church and State, and knew, experimentally, that such a condition of things was incompatible with civil and political liberty. Convinced that representation was the only fair basis of taxation, they saw that to constitute a happy and a prosperous people, a plan of government must be chosen, which, while it would afford to all equal protection, should cause every class of citizens to be fully and fairly represented. To effect these objects, it was deemed proper to exclude privileged ranks, and extend the elective franchise to all without regard to religious opinion, due reference being had to the fair representation of property. Of the efficiency and beauty of the system, which the framers of our constitution have presented to the world, there can be no doubt, so far as the present is concerned. Of its capability to withstand the changes of circumstances, as our population shall become more dense, and a stronger rule be required on the part of the controlling power, time alone can be the test. If past experience can furnish any criterion by which we may estimate prospectively the success of our great national experiment, we have a right to anticipate a future of unexampled greatness and prosperity. Of this past experience, it is proposed to give an outline in concluding these remarks, in the hope, that in the retrospect, our rulers will find ample inducement for carrying out the policy, to which, under its free institutions, our country is indebted for its present prosperous condition. The nature of this article precludes any attempt at detail, and we must be content with general results; which, by affording data, on which comparisons may be founded, will show the progress of the age in which we live. Previous to the year 1816, the useful arts in this country received no protective care at the hands of the government, and were dependent solely on circumstances for their prosperity or decay. It is true, that the war of 1812, whilst it paralyzed our commercial marine, and reduced those who were connected with it to poverty and distress, had a most beneficial operation on the other branches of national industry, and thus conferred a lasting benefit of incalculable importance to the country. Had it not, however, been for the course subsequently pursued by the government, in sustaining domestic manufactures by protective duties, it cannot be doubted, that the return of peace and revival of foreign commerce, would have produced a wide spread ruin to our labouring classes. Fortunately for us, as an independent nation, the wisdom of our rulers saw the necessity of nursing our infant manufactures, and though adverse counsels some times prevailed to the deep injury, and consequent depression of our own labour, foreign commodities were mostly admitted on such terms as should place them on an equal footing with the products of our own industry. The happy consequences of this judicious policy, are to be seen in the fact that the balance of trade has been gradually becoming more and more in our favour, and that, as has always been the case under a proper tariff, our exports for the last year were greater than our imports. Forty years since we were almost entirely dependent on foreign countries for our supplies of manufactured articles, whilst the raw material furnished by us, bore no comparison in value with the amount we had to pay for what we received. The effect of such a state of things was to impoverish us, and enrich the producers to whom we were debtors. The precious metals were constantly taken from us in paying our foreign creditors, and we presented the curious spectacle of a nation, possessing all the requirements to make her the greatest manufacturing people in the world, impoverished and drained of her means to support foreign governments. It is stated in an able and well digested work, entitled the "Progress of the United States in population and wealth in fifty years, as exhibited by the decennial census," from the pen of the Honourable George Tucker, of Virginia, that the number of persons employed in manufactures in 1820, including men, women and children, was but 56,296, the whole number employed in 1840 was 455,668, showing an increase every ten years of 284 per cent. The same author states, that whilst no other branch of our domestic exports has been doubled since 1820, that of manufactures, has increased six fold, that is, from $2,342,000 to $12, 868,840 in 1840, and $13,523,072 in 1841. Taking the amount of money in circulation in 1841 as an evidence of the national wealth, it is stated that the increase in 20 years previous to that period, was from $19,000,000 to $57,503,892, being a decennial increase of 73 per cent. or nearly two thirds more than the increase of population, and though "the quantity of the precious metals in the United States might have been considerably at this time augmented by the large loans contracted in Europe, yet it must be recollected that a large part—it is believed the largest part—of those loans, was contracted after 1837, in consequence of the reaction occasioned by the preternatural distension of the currency, and tended rather to check the efflux of specie, than to increase its import, and that the equilibrium was restored before 1841. From various comparisons instituted by this writer, it appears that the results are as follows:

			Per Cent.
Decennial increase of land in 10 States,	68	per cent. of population,	30 08
“ “ Virginia,	31	- - - - -	07 00
“ “ New York,	27	- - - - -	37 00
“ “ Imports in 50 years,	47	- - - - -	33 50
“ “ Exports “	51	- - - - -	33 33
“ “ Imports in 20 years,	33	- - - - -	33 33
“ “ Exports “	33	- - - - -	33 33
“ “ Imports of Tea,	61	- - - - -	33 33
“ “ “ Coffee,	81	- - - - -	33 33
“ “ “ Wine,	46	- - - - -	33 33
“ “ “ Manufact.	46	- - - - -	33 33
“ “ “ Specie,	82	- - - - -	33 33
	601		371 94

Which shows the decennial increase of capital and wealth to have been to that of population, as 601 to 371,94, or nearly as 50 to 31.

What cause of self-gratulation do not these statements afford to every American, and how fully do they illustrate the superior excellence of our institutions, which by giving free scope to national enterprize under a wise and liberal protective policy, draw forth and give expansion to the energies and enterprize of the people.

The spirit of the age is an untiring spirit of industry. No era of the world has been more strongly marked by a characteristic which cannot be mistaken. It is seen to have pervaded every government and every people where civilization is on the march.

That it is productive of the greatest prosperity to the human family cannot be doubted. Its harmony with the most extended commerce, is obvious from the fact that at no former period has the ocean borne upon its bosom a more numerous and splendid commercial marine; while the imports and exports of every trading nation, have swelled into greater amounts than at any previous period, imparting to all nations the varied treasures of each. The great powers of Europe,—England, France, Germany and Russia, are all watching with an eagle eye, and protecting with the national arm, their internal resources as the great fountain from which flow their prosperity and power. The present able minister of Great Britain is following in the footsteps of Mr. Huskisson, by relieving the industry of that great people from many *duties on raw materials*, and striking from their statute book all useless and inoperative imposts—and if we would maintain our ground in this honourable race for national supremacy in the arts of peace, we must not give ear to theories and disregard the practical lessons, which peculiarly belong to this age of rapid advancement in every comfort of life, lest we find out when it is too late that nations, like individuals, may lag behind the times, and sacrifice their best interests for want of due attention to the useful lessons of that greatest of all human instructers, a well tested, and in our case, a dear bought experience.

The world is under a steam pressure in every laudable pursuit, and information is transmitted with electric rapidity, it would be disgraceful, therefore, to the memory of Franklin, and of Fulton, that the country which gave birth to genius such as theirs, should not profit of it, to leave on the page of history a record of pre-eminence in the great social reform of the eighteenth and nineteenth centuries.

The author of these remarks feels, that in connexion with this subject, as closely allied to our future prosperity, he cannot do better than to furnish entire the following extract from Mr. Tucker's book, in regard to the wicked and unprincipled notions of repudiation entertained by a misguided portion of our fellow citizens.

Extract from Professor Tucker's " Progress in population and wealth of the United States."

" According to the view which has been taken of resources of these States, their public debts, on the most liberal estimate made of them, bear an insignificant proportion to their means, supposing the amount of those debts be $200,000,000, at an interest of six per cent. the annual charge would be $12,000,000, which is little more than one per cent of their present income. But if they were all to provide for the punctual payment of this interest, and thus restore that confidence in the national faith which once existed, or even make an approach to it, the debt could be readily converted at par into a five, or even four per cent stock, and the excess would be sufficient for a sinking fund that would discharge the debt in thirty years or less. In this interval, too, as wealth would be steadily increasing, the burthen would become lighter and lighter, and in twenty-five years it would bear but a third or a fourth of its present rate on the value of property. With such ample means of complying with their engagements, the States have not a shadow of excuse for not faithfully fulfilling them. It is true that these debts are distributed among them very unequally, because their affairs have been administered with very unequal degrees of wisdom and forbearance; but even those States which are most encumbered, may provide for the payment of interest by a moderate tax, which shall be made to bear on all sources of revenue. Thus the debt of Pennsylvania, estimated at $40,000,000, bears at five per cent. an annual interest of $2,000,000. The income of this State was in 1840 $131,000,000, and is probably at this time not less than $150,000,000. A net revenue of only one and a half per cent. of that income would produce the $2,000,000 required.

But were the burthen yet greater, and the means of discharging them yet less, no State which does not set a higher value on property than integrity, can consent to a violation of the national faith; nor would any right minded citizen deem the saving thus effected any compensation for the stain of national infamy it would leave behind it. But the public sentiment of the union, to say nothing of our character abroad, to which we never have been, and never ought to be indifferent, is so decided on this subject, that it is impossible the people of any State can permanently resist it. Even the excuses and pretences which were but too successfully urged by those who make a political traffic of their principles, when the foul stunning efforts of the revulsion in 1830 were felt in full force, will soon find no support from any considerable portion of the American people.

All men who have at once common sense and common honesty, must see that 'repudiation,' if warranted by strict law, would not be just, and though it were just, would be neither liberal nor wise."

To the views here set forth, every sound hearted and right headed

American will yield his most cordial assent, as they are in perfect unison with the genius and character of a nation second to none in feelings of high toned honor or honesty. However these dreams of repudiation may have been indulged in, by political damogogues and unprincipled speculators, to subserve their own particular ends, the sober second thoughts of the American people will, it is confidently believed, set all matters to rights; and free the national escutcheon from so foul a blot. Coming from so respectable a source the opinions of Mr. T, will carry with them their just weight, and aid in putting down a spirit which has already done more injury to our fame as a nation, than any thing that has ever taken place during our existence as a free and independent people, and to use his words, we confidently trust that the cloud which now fearfully overhangs a few States, and to the distant observer, casts a shade over their uncontaminated associates, will soon disappear, and leave the path before us as bright and cheering as the one it is our pride to have passed over.

BRITISH COMMERCIAL POLICY.

It will not be uninteresting to our readers that we should take a short review of the commercial policy of Great Britain by a detail of facts. First, as connected with us as Colonies, and secondly, to show how she has persevered in the same course since our independence.

Before doing this, however, we wish it to be distinctly understood, that it is done in no hostile spirit. We propose to show that from the administration of Sir Robert Walpole, to the present administration of Sir Robert Peel, the policy of England has invariably been not only in every way to encourage, by protective duties and bounties, her own manufactures, but to do every thing in her power to prevent and break down the manufactures of other countries, particularly in her American Colonies, by the enactment of laws, and through other means discouraging every attempt to establish them.

Since that government has ceased to have legal control here, every measure to prevent our manufactures from advancing has been resorted to by their writers on political economy, and by their manufacturers employing writers in this country, and flooding our markets with goods, which they have been enabled often to do without loss, from the fact, that in very large establishments the quantity can be increased, so as greatly to lessen the cost of production. Indeed we have no manner of doubt that they have been willing, and often have, submitted to losses. While immense quantities of British manufactures are often sent here, as the best market to work off an over supply for other markets, which often takes place. Moreover the market is often used for financial purposes. A manufacturer of iron in England, for instance, is pressed for money, and is obliged suddenly to dispose of a large amount of his iron. Knowing that he must make a sacrifice, many reasons combine to prevent his doing so at home. His credit would suffer; he would depreciate the value of the remainder of his stock by lowering its market value. This causes him to look for a foreign market, where he can privately best dispose of it. Of course, we are the best customers England has for that article—their Continental neighbours shutting it out by enormous duties; and here it comes, and is soon sold at a forced sale, to the great injury of the domestic dealer and manufacturer. We have taken iron as the example, but what takes place in that material, is often resorted to in cottons, woollens and other textile manufactures; not, however, producing the same amount of injury, from the variety of prices at which these articles are sold, according to quality.

But let us state the facts. In 1763 there was a danger that the American manufacture of hats would injure the English; it was accordingly enacted by Parliament "that no hats or felts should be exported from any of the plantations to other ports, nor should be laden on any horse, cart, or other carriage, with that intent, under forfeiture thereof, and of five hundred pounds for every such offence;" and Anderson, from whose history of commerce we take the extract, remarks upon it thus: "And as our people are continually increasing in those plantations, we can scarcely too often inculcate the opinion of knowing and intelligent men, that nothing will prevent those people from manufactures interfering with ours, but their being constantly employed in raising naval stores and rough materials *for our own manufacturers*, of silk, flax, hemp, iron, &c." This system indeed commenced earlier, for as far back as 1699, we find a law, "that no wool, nor manufactures of wool, were to be exported from Ireland to any part of the world, but to England; and this only to certain designated ports, under forfeiture of ships and cargoes," "nor shall they carry into any other place or Colony of the King's dominions any wool or woollen manufactures of the English plantations of America." This is the first mention in any English statute book of woollen manufactures in the American plantations."

In 1711, it was enacted "that persons, after the 24th of September, of that year, should not cut down any tree, in any British province in America, of the growth of 24 inches diameter, without the Queen's license was first obtained, under the penalty of one hundred pounds.

In 1721, an act passed Parliament prohibiting the wear of printed Indian calicoes in Britain; and for the encouragement of the wear of buttons, or button holes of silk and mohair, it was enacted that no button holes or buttons should be made of any other material.

In 1722, it was enacted that no copper ore should be shipped from America to any foreign port without being first landed at some port in Great Britain, which was equivalent to a prohibition.

An account of the Colonies published in London, 1731, has the following summary. In writing of New England the author says: "From thence also, as from all our other Continental Colonies, we receive all the gold they can spare, none of which ever returns to them, for we give them, in exchange, all manner of wearing apparel, woollens, cast iron and linen manufactures, East India goods, &c., in all to the value of four hundred thousand pounds annually." The author's conclusion is, that Great Britain gains one million sterling by her American Colonies, (exclusive of what she gains for negroes or for dry goods with the Spaniards in the West Indies,) and "that by the aid of our Colonies alone we maintain and employ at least eighteen thousand fishermen."

In 1732 a company was formed for the settlement of Georgia. A report was made to Parliament by said company in which we find these characteristic sentences: "This report is intended to set forth any laws made, manufactures set up, or trade carried on there, detrimental to the trade, navigation, or manufactures of Great Britain." The report is too long to be here transcribed; we content ourselves, therefore, with making a few quotations to show its general tenour It sets forth "that the height *of wages and the high price of labour*, in general, in America, rendered it impracticable for people there to manufacture linen cloth at less than twenty per cent. more than the rate in England, or woollen cloth at less than fifty per cent. dearer than that exported thence for sale; and it were to be wished that some expedient might be fallen upon to divert their thoughts from undertakings of this nature, so much the rather, because those manufactures, in process of time, may be carried on in a great degree, unless an early stop be put to the progress by employing them in naval stores.

"Moreover, we find that certain trades carried on, and manufactures set up there, are detrimental to the trade, navigation, and manufactures of Great Britain.

"For the state of these plantations varying almost every year, more or less, in their trade and manufactures, as well as in other particulars, we thought it necessary for his Majesty's service, and for the discharge of our trust, from time to time, to send general questions to the several governors in America, that we might be the more exactly informed of the condition of the said plantations, among which were several that related to their trade and manufactures, to which we received the following replies.

"In New Hampshire there were no settled manufactures, and their trade consisted in lumber and fish. That in Massachusetts Bay, the inhabitants worked up their wool and flax into an ordinary coarse cloth, for their own use, but did not export any. That the greatest part of both linens and woollens was imported from Great Britain, and sometimes from Ireland. But considering the *excessive price of labour in New England*, the merchants could afford what was imported cheaper than what was made in that country. That there were also a few hatters set up in the maritime towns, and that the greater part of the leather used in that country was manufactured by themselves. That there had been for many years some iron works in that province, which had afforded the people iron for some of their necessary occasions—but that the iron imported from Great Britain was esteemed much the best, and wholly used by the shipping; and that the iron works of that province were not able to supply the twentieth of what was necessary for the use of the country.

"From New York the Governor reported that they had no manufactures in that province that deserved mentioning—their trade consisting chiefly in furs, whalebone, pitch, tar, and turpentine.

"From New Jersey we learn its chief trade is the exportation of provisions and lumber, having no manufactures established, the clothing and utensils for their houses being all imported from Great Britain.

"Later advices from New Hampshire state that the woollen manufacture is much less than formerly, and the people almost wholly clothed with woollens from Great Britain.

"Later advices from Massachusetts Bay state that the Assembly have voted a bounty of thirty shillings for every piece of duck or canvass to be made in the province. They also make some small quantities of cloth, of linen and cotton, for ordinary shirting and sheeting. By a paper mill set up two years ago they make to the value of two hundred pounds annually. There are also several forges for the making of bar iron or hollow ware, and one slitting mill—and a manufacturer of nails—the woollen manufacture had fallen off, and they do not make one third part of what they wear.

"Later advices from New York say, there are no manufactures here that can affect the manufacturers of Great Britain.

"From New Jersey, nothing new by later accounts.

"From Pennsylvania the Governor writes that he does not know of any trade carried on in that province that can be injurious to Great Britain.

"From Connecticut we learn that they export horses and lumber to the West Indies, and receive in return sugar, salt, molasses, and rum. Their manufactures are very inconsiderable, the people being generally employed in tillage."

In 1745 a law was passed in England, enacting, "That it shall not be lawful for any person in Great Britain to wear any cambric, or French lawn, under the penalty of four pounds, and the like penalty on the seller."

In 1759 an act was passed to prevent British subjects in the Levant, shipping any French woollen goods within the limits of the Turkey or Levant Company. Nor could any cloths be imported within those limits, except accompanied by a sworn certificate that they were of the manufacture of Great Britain.

These are some few, of the many regulations adopted by England in regard to the protection of her manufactures up to the period named. The whole of them would fill a volume.

On some future occasion we shall inquire further into this subject, and show, as we have here shown, that the whole policy of Great Britain has always been exclusively to foster her own manufactures and trade; and this will bring us to the examination of the policy of the British Ministry, by which it will appear that while her political economists were urging upon all other nations the "ignis fatuus," which they denominate "free trade," still England pursued a steady course of fostering, by bounties, and other legal enactments, her own commercial and manufacturing supremacy.

Since preparing the above, we perceive in Hunt's Magazine for June, an article got up with a great array of statistics, undertaking to prove, as its peroration intimates, among other things, that the late reductions in the British Tariff evince an increasing liberality on the part of Great Britain in commercial legislation. We quote from page 548 of the Magazine.

"It is worthy of remark,—in contemplating these very qualifying evidences of increasing liberality of commercial legislation, that one very important principle, which was maintained on the occasion of the modification of the Tariff of 1842, has been entirely abandoned on this occasion; we allude to that of not reducing the duty upon an article of import, without first negotiating with the country of its growth for a corresponding reduction upon articles of British manufacture." And we are afterwards told on page 540, "that out of $54,000,000 of produce sent to England in 1840, $44,000,000 will now be free of duty; and it is a matter of great satisfaction to the friends of commercial freedom and human liberty throughout the world, that at last the leading government has recognized import duties as burthens upon their own citizens, and that they are so considered here. The triumph of principle is a great one, and may soon lead to a relaxation of similar burthens upon the people of the United States."

With due courtesy to the writer of the article from which we have taken this extract, we beg leave to make another extract from the same article at page 541, where he says, speaking of the decline in money prices: "This decline has partly grown out of diminished prices of the raw material, *but mostly from grinding down the wages of industry, until the pittance they earn will not suffice to pay for food, and sustain the government and its debt.* Year by year the artizan, the miner, and the manufacturer, has been compelled to give more labour for the same money, while the amount of money exacted of him has in no way been diminished. On the other hand, the property of the state creditors, the nobility, and the government officials, has been constantly increasing in the same proportion."

Now, we say, that to reduce our duties on British manufactures, and go into what the writer of the article on which we comment, calls "the increasing liberality of commercial legislation," instead of relieving our people from taxation, would have the tendency to tax the labouring classes of this country to an enormous extent, by reducing the value of their labour, and placing it upon a level approximate to the level of those in Great Britain, who, he, says, have been ground down "until the pittance they earn will not suffice to pay for food and sustain the government and its debts." We do not therefore believe his labours in this article, which must have been great, are calculated to deceive those of our countrymen, who are conversant with the very different circumstances which obtain in Great Britain and the United States. Nor will it, we trust, appear that any benefit could arise, to our population, by having the proceeds of such labour brought in here at low duties to compete with our own.

It is the practice of the writers on the side of what they are pleased to call free trade, always to reason upon it as an abstract proposition, leaving out the all important consideration of the essential difference of circumstances under which the labour of various countries is situate. The advantages which England possesses over us in her immense capital, and consequent low rate of interest, in her extreme skill, and the low rate of wages, described by the author we have quoted, forbids any commercial intercourse between us, except upon such restrictions, by duties, as will equalize these advantages, or in other words, will prevent our labour from experiencing a fall nearly equal to that which has happened in England; it may be from the causes stated in the article under consideration.

On the other hand, the very low price of land, producing great quantities of grain, must prevent England from receiving the grain from such countries as can so produce it, while her agriculture is carried on at its present great expense. It is singular enough that the advocates of free trade will never argue with facts as they exist, but always argue as though all things were equal in the different countries of the world. The only free trade we know of, is that which is carried on between the several States of this Union, and *that* exists only because we live under the same laws, and to a great extent, under the same circumstances; nor until some change shall take place in Europe, which will give to labour its due reward, (which we shall be as much rejoiced to see as the author of the piece in Hunt's Magazine,) the people of this country ought not, and we trust will not, agree to remove those restrictions upon its introduction here, which, instead of taxing them, as is pretended, are mainly instrumental in rewarding them, and enabling them to partake of the comforts of life. Free trade between Europe and the United States, would carry us back to a colonial dependence upon England. Indeed, it has often been proved that the depression of our industry, and the consequent low price of wages, was one of the principal causes, if not the only one, which produced the adoption of our present glorious Constitution, and gave to Congress the power to lay duties to preserve us from the curse then fastened upon us by the so called free trade.

We propose, ere long, to examine the recent reduction of the British Tariff, which had never been made, had not the Minister believed he was relieving the manufacturers of England, by reducing duties upon raw materials, and thus giving them the supremacy over all others. To take off duties from raw materials entering largely into manufactures, is a very different matter from removing them from the manufactured article, which derives its principal value from labour, and that particularly, when that labour is "a mere pittance that will not suffice to pay for food." Moreover, the raw material of cotton, Great Britain can nowhere else obtain on terms so favourable as from us. Timber from foreign countries pays one pound five shillings sterling for the same quantity, which from a British possession pays *one shilling*. Wood planed or dressed from foreign countries pays ten pounds for the same quantity, which from a British possession pays five pounds. And many other articles in the same proportion—but we reserve further remark until we take up the British Tariff, when we shall show what British commercial policy now is, and then leave the American people to judge how far she is entitled to credit, "from the friends of commercial freedom." Like the propeller of a boat, she may look one way, but she rows lustily the other.

COPPER MINES AND THE COPPER TRADE.

Hitherto copper mining and the copper trade have attracted but little attention in the commercial circles of the United States; an ample supply of the article has been steadily furnished, and at uniform prices; the absence of all fluctuation in the value of copper has occasioned no motive for inquiry, and except among the immediate dealers in the article, no interest in the subject has existed, and even among them, little is known of the sources of supply, or the extent and circumstances of the business.

A few feeble and unsuccessful attempts have been made in the United States, during the last fifty years, at copper mining, which have created a very unfavourable impression in the public mind on the subject, and not only no disposition exists to examine the matter, but a positive dislike to the whole subject pervades the minds of that portion of the public to whom it properly belongs—the capitalists; which is entirely the result of a want of information. Within a short time the mines of Lake Superior have called attention to it; it is now becoming in some degree a subject of inquiry and may justify an attempt at its elucidation. The sources of information are so various that it is not deemed necessary to refer to them, further than to say they are principally derived from the London Mining Journal and Review.

The principal sources of the supply of copper to the general market of the world, are, England, Ireland, Cuba, and Chili. Sweden and Norway were formerly productive in copper, but of late years they furnish but little; the production of Russia is equal to its consumption; the rest of Europe furnishes a large quantity, but not sufficient for its wants, and the exports from England to Europe, the East Indies, and the United States are very extensive. Our own supply is derived from England, and the west coast of South America, whence we receive it in the form of pig copper, which is refined and rolled into sheets and bars, at Baltimore, New Jersey, Connecticut and Massachusetts, where large establishments exist for that purpose.

The principal mines of Cuba are in the neighbourhood of St. Jago de Cuba, at the eastern end of the Island. They consist of three principal mines and a few smaller ones, and are worked mostly on English account; they have been in operation only about fifteen years, for only eight or ten of which their product has been large, and they are now by far the most productive copper mines in the world; though the extent of their working is comparatively small. Mines which promise to be equally productive with those of St. Jago de Cuba, are now beginning to be opened in the district of Bayatavo, on the north side of the island, near Neuvitas; their operations are partly on American account, and should the reasonable expectations of their proprietors be realized, they will in a few years give us all the copper we require. But little is yet known of the copper mines of Lake Superior and Wisconsin. Some small quantities of copper from the latter source have reached the market, and high expectations are entertained by many persons in relation to the former, but some years must elapse before their extent can be determined or their products make any important impression upon the market. The system which our Government has adopted in relation to them—to lease them for three years only—hardly time for exploration and a commencement; and at a greater rent charge than is paid upon the richest and most extensive mines in England, which have given splendid results through a long series of years; and then granting a privilege which covers an area large enough for 20 strong companies to a single individual, who will, of course, exclude all search within his own mile square, is directly calculated to prevent their developement. In England the leases are generally for twenty-one years—the rent charge a twentieth, or five per cent of the *ore* produced; while our government takes six per cent. of the product in metal, with a three years' lease, conditioned only to renew on an increase of the rent charge to *ten* per cent. of the metal, with bonds and penalties irksome to intelligent miners.

Copper mining in England is of a comparatively recent date. The copper coinage of Great Britain in 1717, was from Swedish copper; the domestic supply became equal to the demand about 1725, yet the quantity then required was very trifling, compared with the present demand; from 1765 to 1775, the average annual product was but little more than is now given by a single mine in Cuba; about 1790 Great Britain began to export copper, and now furnishes a large proportion of the supply, from her own mines, and by the purchase and smelting of the ores of Cuba and Chili.

The price of copper has been very uniform for a century, notwithstanding the great reduction which has taken place in most of the products of human industry, by the improvements in the mode of their production; in 1772, its price was £100 per ton; in 1791, it had fallen to £79, owing to the vast product of the Anglesea Mine; its present price is £84, and its average price for the last 75 years, may be stated at about £90 per ton. The mines of Ireland, which now furnish a large quantity of ore are, of very recent date, only a few years having elapsed since they began to furnish any important addition to the supply. The mines of Sweden and Norway, are very ancient, and were formerly much more productive than at present. Copper mines are now worked in Norway for English account; those of the west coast of South America have been many years in operation, their product is increasing, and the ores and copper are shipped from Valparaiso, Coquimbo, and Copiapo; the ore to England to be smelted, and the copper to France and the United States. The mines of Cuba, as before stated, are of recent date, and by far the most interesting to us, as they are in our own neighbourhood, and will soon be the source from which not only our supply of copper will be derived, but they offer a splendid field for American capital and enterprize, which must soon attract attention, and they will probably lead to the developement of our own resources, which were they at all appreciated, would not be suffered to remain in the obscurity in which they now languish.

The demand for, and consumption of copper in navigation, manufactures and the arts, is rapidly on the increase; so much so, that the product of Cuba, which is now equal to one fourth of the annual supply to the general market, and which has been gradually coming into notice during the last ten years, has made no important impression upon the price of copper; the increase of demand has been equal to the supply, and the value of copper has remained steady, while that of iron has vibrated through all the gradations from excessive profits to ruinous losses.

The statistics of copper in England are furnished with great accuracy, annually, from June to June, derived from the sales in Cornwall and Wales, which are at public auction, and regularly reported. The following table of the product of the most important mines in England and Ireland, and those of Cuba and of South America, is the result, from June 1843, to June 1844, and the total results embrace nearly the entire quantity brought to market during that period. A ton of copper ore is 21 cwt., with an allowance for moisture, &c.,—the standard is the value of a ton of copper in the ore, and varies with their product and quality; the fractions of the pound sterling have been omitted, as a general estimate only is required for our object—a general and proximate exhibition of the extent of mining operations.

TABLE

Of the produce of British and foreign mines, from June 30, 1843, to June 30, 1844—containing the quantity of copper ore sold from the mines, and the amount of money—the totals giving the amount of ore—fine

the copper, and money—the average standard—produce—and price for year, both in Cornwall and Wales.

MINES IN CORNWALL.	Ore from each ton of 21 cwt.	Amount money in pounds sterling.
Bottallach,	2,536	£23,267
Brallen Wheal,*	1,254	6,296
Brewer Wheal,	1,283	6,588
Consolidated,	10,200	55,668
Carn Prua,	8,070	42,414
Cook's Kitchen,	422	1,424
Cambourn Vein and Stray Park,	2,444	12,081
Darlington Wheal,	1,936	8,900
Dolcoath,	3,974	18,287
Earl Wheal Crofty,	4,728	29,586
Earl Pool,	1,565	8,990
Friendship and Prosper Wheal,	6,499	29,051
Fowery Consols,	12,341	66,787
Holmsbush,	2,305	17,502
Jewell Wheal,	1,833	11,042
Levant,	1,698	15,372
North Roskear,	5,640	29,292
Poldice,	3,886	16,089
Providence Wheal,	2,759	19,163
Par Consols,	6,536	37,204
South Roskear,	1,974	11,177
South Wheal Bosset,	4,229	27,613
South Caradon,	5,166	29,180
Frethellen,	3,284	14,316
Treweras Wheal,	1,878	17,475
Tressavean,	9,322	41,092
United Mines,	12,668	61,935
United Hills,	3,788	16,495
Virgin Wheal,	1,899	10,396
West Wheal Jewell,	1,950	9,856
West Caradon,	2,870	19,955
Sundry smaller mines,	—	—
	137,930	£714,493
MINES IN IRELAND.		
Braerharm,	4,753	£37,614
Brallymurtagh,	3,264	11,497
Coshun,	455	2,456
Comaree,	112	1,180
Cronebane,	850	4,061
Knockmahon,	9,351	67,318
Clandino,	988	7,378
Lackamore,	212	2,000
Sundry smaller mines,	....	....
	19,985	£133,504
MINES IN CUBA.		
Cobra mines,	17,537	£231,327
Cuba,	4,102	87,448
Royal Santiago,	9,152	136,709
San Jon de Cobu,	1,427	32,215
M. San Fernando,	283	4,061
	32,500	£491,760
MINES IN SOUTH AMERICA.		
Chili,	8,296	£184,870
Copiapo,	1,323	23,736
Valparaiso,	1,523	34,059
	11,142	£242,665

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* Which is the Cornish name for mine.

Copper ore sold in Cornwall—Average standard, £109 17*s.* Average produce, 7 3-8 per cwt. Average price, £5 6*s.* 10*d.* per 21 cwt. Amount of fine copper, 11,246 tons, 14 cwt. 1 qr. 20 lbs. Amount of money, £815,246 9*s.* 6*d.* Amount of copper ore, 152,667—tons of 21 cwt.

Copper ore sold in Wales—Average standard, £92 4*s.* Average produce, 16 7-8 per cwt. Average price, £13 9*s.* 4*d.* for 21 cwt. Amount of fine copper, 11,107 tons, 18 cwt. 19 lbs. Amount of money, £882,516 8*s.* 6*d.* Copper ore, 65,520—tons of 21 cwt.

Total in Cornwall and Wales—Copper ore, 218,187 tons of 21 cwt. Fine copper, 22,354 tons 12 cwt. 2 qr. 11 lb. Amount of money, £1,697,814 18*s.*

A careful examination of the foregoing tables cannot fail to impress the mind with the importance of copper mines and the copper trade to Great Britain. By a combination of circumstances—the fact of having extensive mines of her own, for which smelting establishments have long existed, and having commercial arrangements with all parts of the world, and her merchants being aware of the advantage of the trade—the products of the mines of other countries have been drawn to England by the facilities of smelting. Want of capital, and the limited production of the mines of the various countries, at the commencement of mining operations, has prevented the establishment of smelting works; and the ores, having once found their way to England, and a certain market there, they have continued to flow in that direction until the present time, and England now controls the copper of the world.

Another remarkable fact of the copper trade there is, that it is confined to seven (7) establishments, all of which are located in and near Swansea, in South Wales. Some of their establishments date their commencement at a remote period, while others are of more recent origin. We subjoin the names of each, and the quantity of copper ore purchased and smelted by each, in the years to which our previous table refers, 1843 and 1844.

Copper Ore purchased by the Copper Companies in Cornwall and Wales.

Purchasers.	Tons ore.	Am. Money.		
Mines Royal Co.,	5,118	£44,407	18*s.*	2*d.*
English Copper Co.,	34,852	266,035	4	0
Vivian & Sons,	41,628	312,759	1	6
Freeman & Copper Co.,	24,434	173,118	19	7
T. Grenfel & Co.,	27,674	221,572	4	10
Sims, Willyms, Nevil & Co.,	27,186	204,054	17	8
Williams & Crown Co.,	56,295	475,866	12	3

The inquiry will naturally arise, why has the business which is so extensive, been confined to so few concerns? The probable reasons are, the isolated position where it is conducted, away from the general sphere of commercial enterprise—the great wealth of the parties, and the extent of their establishments—the fact that the smelters are many of them extensively interested as shareholders in the copper mines at home and abroad—the powerful opposition they have given to the attempts which have been made to create rival establishments—the system of working the mines in Cornwall, by tribute—that is, the miner receives a certain sum per pound sterling at which the ore shall sell when ready for market, as the price of his labour in obtaining it—the necessities of the miner, as well as a settlement of his account of wages, requiring an expeditious sale, for which the wealth of the smelters is always adequate and at hand.

These circumstances have for a long period kept the business in the present hands, and will probably continue to do so for years to come. The working miners have long complained of the hardships to which the smelters subject them, but they are too feeble a class to offer any resistance. An extensive project was started a few years since, having in view a combination of the mining interest in their own defence; but it struggled but a short time against its powerful rivals, who readily found the means to destroy its energies and extinguish its early life.

In addition to the *direct* advantage which England derives from the control of the copper trade, which enables her to prevent competition between the product of her own mines and the richer mines of other countries, by bringing it all under the control of her own copper companies, who are able to hold it at pleasure, and this in a measure compensates the English miner for the hardships they inflict upon him—the *indirect* benefit accruing to English capital, industry, and revenue, are of great importance.

The following is an approximate statement of these advantages, properly estimated within their real limits.

Freight on the 11,142 tons of ore from South America, at £6 per ton, - - - - - - - - - - -	£66,852
Freight on the 32,537 tons of ore from Cuba, at £2 10*s*. per ton, - - - - - - - - - - - -	71,342
Commission and incidental charges on the whole value equal to 6 per cent. on the amount of sales at Swansea, - -	44,065
Duty to Government averaging £1 per ton on 43,679 tons, -	43,679
Cost of smelting 43,679 tons of ore at £2 15*s*. per ton, consuming 70,000 tons of English coal, labour, &c., - -	120,116
Profit of 10 per cent. upon the amount of ore purchased at at Swansea from Cuba and Chili, - - - - - -	73,442
	£419,496

This is a clever amount to be distributed among the smelters, ship owners, coal mine proprietors, government and labourers of England, derived from the product of the mines of Cuba and South America; yet it is the best disposition of the product which is as yet practicable to the proprietors of these mines, and it leaves them generally a good profit upon their operations. Apprehensions are beginning to be felt in England that their advantages may slip from their grasp, and strenuous efforts are being made to induce the government to remove the duty on copper ore into England, which now varies from £3 to £6 per ton of copper in the ore imported; this duty will doubtless be removed, but probably not until it is too late to retain the advantages now enjoyed.

The number of copper mines in operation in Cornwall and Devon, is at the present time about one hundred and fifty; the number of persons employed in, and dependent upon the pursuit, is estimated at from 60 to 70,000; the number and power of the steam engines employed is probably greater than can be found in any equal area on the globe. Copper mining, like internal navigation in the United States, owes its importance to the steam engine; up to the era of Watts, it was comparatively a limited pursuit, but his improvement in the steam engine, gave the miner the power required to descend to the rich deposites of ore, which his previous feeble means had not enabled him to reach; for more than half a century he has been sending the rich stores of mineral earth to the surface, and the supply is still as abundant as ever, and though, doubtless, the mines of America will, at no distant day, eclipse the glory of those of Great Britain, enough will remain for all our own wants.

The following statement of the extent of the operations at the largest mines in the county of Cornwall, the Consolidated and United Mines, the area of whose sett, as the mining field is termed, is only two square miles, will give a vivid impression of Cornish Mining. The number of steam engines employed in draining the mines of water and bringing the ore to the surface, is eight, of from 80 to 90 inch cylinders, and about thirty smaller ones; the number of persons employed in all departments of labour is from 2 to 3000; the cost of working £5,000 per month; the number of tons of ore annually is 22,866, and the value about £125,000. The deepest shaft is 2,100 feet from the surface; the depth of all the shafts combined, is 20 to 30 miles, and the combined length of all the horizontal galleries for extracting the ore is from 60 to 70 miles, cut with gunpowder through the solid rock, and this is *one* only, though the largest, of the one hundred and fifty mines. The great adit of the county, which discharges the water of the mines into the sea, near Falmouth Harbour, is a splendid effort of human skill, industry and perseverance; it was begun in 1748, and is thirty-five miles in length, winding its way beneath the surface of the earth through the county from its southern to near its northern shore, and of dimensions sufficient to carry off the accumulated waters of the mines, at a depth of from 1 to 500 feet below the surface.

The ores after being raised to the surface and properly dressed, are carefully assayed by taking a fair sample of each parcel, and the products of copper ascertained, which, on an average of years, is about 8 per cent. They are then sold to the smelters, transported by rail road, generally, to the coast and shipped to Swansea; they there meet the ores of Ireland, Cuba and Chili, and a judicious combination of the whole facilitates the reduction of each description, and the copper is thence distributed to the world in the form of sheet, bolt, cake, or other copper, as the wants of each section require.

The official report of the export of copper from England is annexed, which gives a good view of the extent of the sources of supply which each country enjoys in its own mines.

Abstract of the Parliamentary Returns of Copper Exported, showing the quantities taken by the countries connected with Great Britain, and by other countries, in the year ending 5th January, 1844:

To Countries independent of Great Britain.

	Tons.	cwts.	qrs.	lbs.
Russia,		7	1	4
Sweden and Norway,	39	18	2	8
Denmark,	4	11	2	6
Prussia,	80	3	3	0
Germany,	808	15	1	14
Holland,	900	0	3	0
Belgium,	463	11	3	6
France,	5,085	13	3	0
Portugal, Azores, and Madeira,	151	2	2	19
Spain and Canaries,	56	5	3	25
Italy,	810	5	1	7

	Tons.	cwts.	qrs.	lbs.
Turkey and Greece,	13	19	0	11
Africa,	117	14	1	26
Foreign West Indies,	183	2	0	10
United States,	1,483	4	2	8
Brazil,	421	17	3	11
South America,	83	11	3	17
To countries in connexion with Great Britain.				
Asia, principally to the East Indies,	6,439	11	2	14
Australia,	88	2	3	18
Gibraltar,	90	17	3	4
Malta and Ionian Islands,	44	1	3	27
British North America,	141	1	1	0
British West Indies,	222	3	0	19
Guernsey, Jersey, &c.,	77	7	1	13
	7,073	6	0	11
	17,777	12	3	15

The foregoing having established, we think, beyond a doubt, the extent of copper mining and the copper trade as a branch of national industry in England, independently of its importance to her as a great maritime people, to whose national and mercantile marine copper is an article of the first necessity, the question, is it profitable? will naturally arise—and to this we furnish a reply.

Mining is a pursuit extra hazardous in the estimation of society generally; this is to some extent a well founded opinion, and mining should therefore be prosecuted, as it is generally in England, by associated capital; but from the great improvements in science and the art of mining, the hazard of the pursuit is much less than it was formerly, and the extra profits which success secures, especially in mining for copper, fully justifies the extra risk. Capital in copper mining in England, for a series of years, has yielded a larger average profit than almost any mode of investment; some of the results there, and in Cuba, which we shall detail, will exceed the hopes of the most sanguine.

It is important to the interests of the United States, that the unreasonable prejudices which occupy the minds of our wealthy citizens should be removed, in order that our mineral resources may be developed; and we are happy to know that they are being removed, and that before many years elapse, we may be extensively a mining nation. Providence has been lavish of mineral riches to the Western Continent, as our coal, iron, and lead deposites demonstrate—why not of copper? What an effort of patient toil and perseverance was that of White and Hazard! made in spite of ridicule and indifference, to bring the public to appreciate the coal mines of Pennsylvania? Twenty-five years since, and $50,000 would have purchased the exclusive right to mine coal in the whole anthracite region, and the parties who should have made the investment, would have been deemed by their friends, and the public generally, fit subjects for a bedlam! Who imagined, a few years since, that the western lead region would furnish in 1843 forty-three millions pounds of lead? It will soon reach a hundred millions, and supply the world!

Now, there is always uniformity in the laws of nature, and it is a fair inference, from the fact that the deposites of coal, iron and lead are so abundant in our continent, that the extensive indications of copper, which range through the country from Massachusetts to North Carolina, will not disappoint the expectations of the miner; and this, notwithstanding the reports of State geologists, who have generally been adverse or indifferent to this view of the subject. Geologists, especially American, are not miners, and it is a fact, though without good reason, that miners generally have a poor opinion of geological science, and deem its theories, as to deposites of metal, of no value; while it is true that the science of mineral deposites is confessedly one of the topics on which geologists are yet quite at fault, and it remains to be settled, by further developements, what are the laws which govern them.

The Consolidated and United Mines, the largest, but not the most profitable in Cornwall, gave a return to their proprietors during ten years, from 1825 to 1835, an annual average product of £119,800, with a clear *profit* of £21,000 on a capital of £75,000, paying in ten years 280 per cent. on the investment, after paying back the original capital; it is still, 1845, a profitable concern, and has been certainly a tolerably fair business. The stocks of many of the Cornish mines are quoted as follows in the Mining Journal of May 17, 1845:

Prices of Mining Shares.

Names of Company.	No. of shares.	Am. paid.	Price.
Tressavean	96	£10	£280
Coshun	128	20	200
Carn Prua	1000	15	90
Earl Wheal Row	128	50	1500
South Caradon	128	5	600
Wicklowe (Irish.)	6000	5	16⅜
Bottallach	100	175	480
Westerlake	240	3	100
Wheal Maria	1024	1	500

It must be admitted that many others are at a much smaller advance, and quite a number are selling below the cost.

The Mining Journal of Dec. 28th, 1844, has the following statements on the business of mining, for the year then closing:—

"The transactions in mining shares during the last twelve months have so far exceeded the average business of many years, that a general review of the mines of the present time may be interesting. The dividends paid in the last twelve months on twelve of the principal mines, have been as follows: Bottallach £10,000, or £100 per share; Fowery Consols, about £10,000; Par Consols, £10,000; South Caradon, £9,600, or £75 on the original outlay of £5; West Caradon £5,000; South Wheal Bosset, £7,360; Tamar Consols, £4,500; Tressavean, £4,560; Frethellen, £4,200; Brewer, £3,600; Tin Croft, £3,000; East Wheal Bosset Lead Mine, £46,400—making a total of dividends paid in twelve mines of £121,220—an average of 18 per cent. on the market value of the mines, and of more than 100 per cent. on the original outlay. The dividends in Tressavean were temporarily suspended in September last, the mine having up to that period paid without intermission £445,000 profit to the shareholders.

The agent of the Carn Prua Mines reports as follows at the meeting of the company in March, 1845: "In looking over our returns for the last ten years I find the *profits* to amount to about £130,000. Add to this for increase of machinery £20,000, also for ore discovered and now in the backs of the lodes, to be taken away, £75,000—total £225,000—so that we may say that the mines have profited in ten years £225,000;

and I believe that if a fair price can be obtained for our ores produced, we shall be able to equal, if not exceed, the average of this profit, taking one year with another."

The editor of the Mining Journal remarks, March 15, 1845, in relation to Wheal Maria Mine,—a *new* enterprize in the eastern section of Cornwall: "The whole capital subscribed is, we believe, a little more than £1,000, or £1 per share on 1,024 shares, while the price asked for a single share is £300 to £350,* although we are not aware of any transactions at that price. Within the last few days we are given to understand a lode, supposed to be *the* lode, has been cut at 600 fathoms east in the sett, which is reported as being twelve feet big, with good stones of ore. The second sale will be 636 tons, and the next, we understand, 1,000 tons, producing £11 to £12 per ton. The shaft is now down about 26 fathoms (156 feet), the lode being stated to be worth £500 per fathom, as it is the 23 fathom level going west, the ore-gruond being 18 feet big. The ore already sold produced £4,300, to which add the second sale, say £8,500, will give £12,000. The month's cost may be taken at £650—the March ores are estimated as giving from £11,000 to £12,000, or in all upwards of £20,000, from a few fathoms of ground, thus justifying the representations made by us on our late visit there."

The most splendid results have attended the mining operations of the two English Companies in Cuba, near St. Jago. They are now realizing from 50 to 100 per cent. per annum *profits* upon the capital invested. At a meeting of the Royal Santiago Company in London, July, 1844, in reply to a number who complained of the smallness of the dividend to be declared, the Chairman, Mr. Alderman Thompson, M. P., said:—"they should bear in mind the fact that they had been paid of *profit* in four years, £183,898, exclusive of the present £21,350; and they (the Directors) had received from the proprietors £70,000, and there was now an additional sum of £40,000 as a reserve fund on hand. Hitherto the most unexampled prosperity had attended this concern, and if *any* idea could be formed of a mining enterprise, *the best was yet to come.*"

The Consolidated Copper Mines of the Cobu Association, the other English Company in Cuba, shipped to England in 1843, 20,255 tons of ore, which gave a profit of £29,411; and the profits of 1842 were £11,492. These mines were estimated in the formation of the Company, as equal to £480,000—$2,300,000. The per centage of dividend is, therefore, small, though the gross amount of profit is very large, notwithstanding their position is very unhealthy, and the cost of management very heavy. These statements we deem sufficient to answer the question proposed—are they profitable? and leave the reader to draw his own conclusion from the premises we have furnished for his consideration.

We have now arrived at the point of our investigation most immediately interesting. The importance of establishing smelting works for the reduction of the copper ores of Cuba, in New York or its neighbourhood, or at the position which experiment shall determine as the most advantageous—as an encouragement also to the working our own mines, and the introduction of a new branch of trade to South America.

The contiguity of New York to Cuba, only ten or fifteen days sail, nearer by the whole breadth of the Atlantic than England, renders it the natural position for their reduction, should the requisite experiments demonstrate its practicability, as South Wales is for those of Cornwall, it being the nearest point of contact with the coal necessary to the business.

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* Since quoted at £500.

The product of Cuba, as previously stated, is at present very large, and rapidly increasing. The amount shipped to England in 1842–3, was about $1,800,000; in 1843–4 it increased to $2,300,000; and in 1844–5 will probably reach $3,000,000; and should the mines at Bayatavo succeed, the quantity will rapidly increase, and in a few years exceed in value the product of Cornwall. One English Company is already established at Bayatavo, and by late advices another is on the way, in addition to the American and Spanish companies already in operation.

Whether the product of the mines worked on English account, can be attracted to New York, is a question of some uncertainty; they will exert their utmost efforts to prevent the loss of so lucrative a business to England, but if it can be made *for their interest* to send them here, they will come after a short time; but all the ores raised on Spanish and American account, will come to us of course, if we offer them equal facility, and as good a market, as is offered in England. The quantity which may be reasonably expected from those sources, will reach a million of dollars annually so soon as an establishment is created, which will command the confidence of the miners of the island.

The method of smelting in England is the same, at present, as it has been for fifty years, with bituminous coal and in reverberatory furnaces. The ore, after preparation by crudling to the required size, is properly mixed, the rich and poor, the sulphuerets, oxides and carbonate of copper, the three principal descriptions of ore; it is then subjected to the process of calcination in large reverberatory furnaces, where it is kept at a dull red heat and frequently stirred for many hours to drive off the sulphur and arsenic, and to oxidize the iron, which generally constitutes about 50 per cent. of the ore proper. After sufficient calcination, the whole is melted, the copper precipitates and the scoria is removed, it is then discharged into water to granulate it, when it is again calcined and remelted, and by repeated calcination and melting, is finally reduced to the condition of merchantable copper by the process of refining. Scarcely any science is applied to the business in England, and it is rude compared with the scientific process of the Continent.

The price of coal is extremely low at Swansea, only about 3*s.* 6*d.* sterling to 4*s.* per ton, and the quantity required to reduce a ton of ore of average 8 per cent., is about one and three quarter tons of coal, hence the importance of bringing *the ore to the coals*, as the smaller quantity to be moved. It is from this circumstance, the very low price of coal, that in England the idea of smelting in the United States is treated as ridiculous by the opponents of a removal of the import duty. Though they have in this respect a decided advantage, and though many ridiculous statements of our position have been made by persons who ought to be better informed, yet still this advantage may be met by others, equally important, which we enjoy. To exhibit the opinions held of our ability to smelt, we quote the report of the remarks of Sir Charles Lemon, M. P. for Cornwall, made at a public meeting of mine adventurers, held in February, 1845: "In reference to smelting in America, Sir Charles entered into a *statistical* statement, which shows, that although coal is produced in five States of that country, yet the situation of the coal fields is a barrier to the smelters in America successfully competing with those of England. Pennsylvania produced three-fourths of the fuel raised in the American States, and the pits were at least one hundred and fifty miles from the coast. It is therefore not the quantity or the quality of the coal raised, but the *position* of the coal fields they should consider. A gentleman at Falmouth, once an American merchant, had stated that all the soft coal was found west of the Alleghany Mountains, from whence it is difficult to convey it, and very expensive. There was a canal at the foot of the mountains by which coal was conveyed to Baltimore. If then the smelting of ore was not carried on there, there was little danger of its being entered upon in any other part. Professor Rogers' report stated that the coal fields of Pennsylvania extended over thirty counties, consequently, with the great range and the variety of mineral raised, Pennsylvania depended upon England for a considerable proportion of its supply of fuel. The price of coal at Baltimore was $5.00 (22s.) per ton—just seven times more than our smelters paid at Swansea; there was, he repeated, therefore, not the slightest reason to fear successful rivalry in smelting while there was any coal in our country. Coal was imported into New York and Massachusetts at a price of $6 50 per ton, besides the freight; yet they were told that smelting works were to be constructed in Boston. The idea that Boston, dependent as it was on England for fuel, was likely to rival us in the smelting of ore, was, in his opinion, the wildest dream any man could utter."

It is strange that such *statistics* should pass current among intelligent men in England, yet so it is. Such a curious bundle of absurdities is rarely seen. It may be, nay, more, it is highly probable, that with the application of science and better methods, and the power of anthracite coal, already so successful in the reduction of iron ores and the *refining* of copper, we may be able to smelt copper ores at a price as low as is charged in England.

The statements of a distinguished metallurgist from Sweden, who visited England in 1833, and who then published the result of his examination of copper smelting there, in the Mining Review, are anything but creditable to English smelting, on the score of science or economy. He gives the cost of smelting a ton of 8 per cent. ore in Sweden, with charcoal, in cupola furnaces, at 7*s.* 6*d.* stg. per ton—while by the English process, with a great loss of copper, it is, by the best estimate he could make, 12*s.* 6*d.* per ton. He recommends to them the adoption of the Continental method, and estimates that the *saving* by that plan, adopted in all the works at Swansea, would be £30,000 per annum.

At the Alton Mines, in Norway, which are worked for English account, the average cost of smelting for the year 1844 was $7 50 per ton. Their furnaces are reverberatory, and the whole process is English, with a slight variation introduced as a recent improvement. The agent, in his report to the proprietors, recommends the Continental method, and assures them, that by that process he shall not only be able to reduce the cost of smelting, but be able to make better copper. It is a fact well known, that English copper will not compare in point of quality with that made by American refiners from South American pig copper, which is reduced, in a rude way, with wood and charcoal. If, then, copper can be smelted in Sweden at 7*s.* 6*d.* stg., $1 80, and by Englishmen in Norway at $7 50, who will say it cannot be done in New York, or its neighbourhood, at the price charged in England—£2 15*s*., or $13 30. But this is not necessary; we have a large margin left, adequate to any difficulties which may arise in the prosecution of the enterprise.

The freight of a ton of ore from Cuba to England, is £2 10*s*.—$12 10; to New York it is $6, giving us $6 10 advantage. The duties into England is, on average ore, £1 per ton of ore—$4 84; into the United States—nothing; a second benefit of $4 84. Admitting the incidental charges to be equal in both countries, and English merchants understand the importance of this source of profit and improve it, we are now able to charge $24 25 per ton for smelting, and yet offer the miner the same price for his ore as is paid him by the English smelter. If we add to this the fact, that the product of the ore when smelted is in a better market than the English smelter enjoys, by at least the amount of freight, commission, and his profit on the 1,400 tons of copper be such as in 1844, together with the duty our own government imposes on all copper. not now free, the question is settled beyond all peradventure, so far as a judicious and careful calculation can settle it, and nothing but *experiment* can throw any further light upon the subject. We have purposely left out of view the fact, that by transferring the ore by the coal boats returning unladen from New York to Mauch Chunk, at a freight not exceeding $1 per ton, we can have coals nearly or quite as cheap as the Swansea smelters; and then surely American ingenuity can compete even with English experience, if it has an advantage of $10 per ton less freight and duty, and a better market for copper.

George Ditson, Esq., Vice Consul for Neuvitas, Cuba, has been for some years mining copperat Bayatavo, and endeavouring to induce American capitalists to embark in the business of smelting of copper in the United States, and we cannot but hope his expectations will be soon realized, and so important a business become, naturalized among us. A friend informed us that in October, 1844, he saw at one time, twelve large British ships in the port of St. Jago de Cuba, loading with copper ore for Swansea; shall we ever see American ships there loading with ore for New York?

Smelting works in New York would also aid in the discovery and working of our own copper mines, which must begin in a small way, and gradually increase in extent and importance. They would also open a new business with South America. One of the arguments of the English smelters for a repeal of the duty on ore into England, is the advantage it gives to the English merchant ship by furnishing a return cargo, from which all others are excluded, the import of ore into Great Britain being restricted to her own vessels. Voyages to that part of the world on American account are now prevented by the want of return cargoes; the ore which now goes entirely to England furnishes return cargoes to twenty-five ships per annum, the whole of which would come to us, while the English duty continues at least, if not after it is removed, if we were ready to convert it into copper at a reasonable price, and thus our ships would gain freight, and our goods a new market, by our thus creating an article of remittance from that portion of the world.

AMERICAN FACTORIES.

We have received, by the arrival of the last steamer from England, a small book, entitled "American Factories and their Operatives, with an Appeal on behalf of the British Factory Population and Suggestions for the Improvement of their Condition: by the Rev. William Scoresby, Vicar of Bradford; Yorkshire, Fellow of the Royal Societies of London and Edinburgh, Corresponding Member of the Institute of France, etc., etc. London: Green & Longmans, Paternoster Row; E. A. W. Taylor, Bradford."

As much has been said about the danger of an immoral tendency in our factory system, we propose to publish large extracts from this book. Being the testimony of a foreigner of the highest respectability, it cannot, we think, fail to be of the deepest interest, equally to those who wish well to the system, as to all inquirers, desirous to know what a disinterested witness says on the subject. Of the city of Lowell, with its manufactures, he writes as follows. The style is familiar and easy, as being better adapted to lectures, in which form they were delivered at Bradford.

"Little more than twenty years ago the place where Lowell stands was but farm land or wilderness. A small factory, indeed, was erected upon the Merrimack in the year 1813, being the first attempt to apply these favourable waters to the promotion of manufactures. So humble was the attempt that the whole cost of the erection of the factory, is stated to have been but 3000 dollars, or scarcely 600 guineas. But the great advantages of the water power for profitable enterprise being fully determined, companies were formed, and their objects so rapidly promoted, that a large extent of ground soon became covered with buildings, and crowded with population. The preparatory measure for rendering the water of the river available for an extensive range of factories, was the formation of reservoirs, canals and locks—works which had long been contemplated, but not brought into effective operation, it would seem, until the year 1822. The year following, 1823, the Merrimack corporation commenced operations for the spinning of cotton, &c., with a capital stock either originally consisting of, or subsequently raised to, two millions of dollars. This was followed in 1825 by the Hamilton corporation, with a capital of one million of dollars. To these succeeded, in 1828, the Appleton and the Lowell, each with 600,000 dollars capital. The Middlesex was the next, commencing operations in 1832. The Suffolk and Tremont, in 1832; the Lawrence, in 1833–34; the Boot, in 1836; and the Massachusetts, in 1840. The capital stock of the last three corporations in the ultimate amounts, up to the year 1844, was very nearly four millions of dollars.

"Thus, betwixt the years 1822 and 1840, eleven companies, or corporations, (including that of the locks and canals,) commenced practical operations; the several companies having been incorporated, for the most part, in previous years; in four of them, however, the activity of the managers was such that they appear to have commenced spinning in the very year of their incorporation. Along with the various mills of the several corporations, from two to five having been built under each, sprang up a corresponding quantity of other structures, for dwelling houses, warehouses, shops, hotels, with churches and other public buildings; and to these were added a number of appropriate places for carrying on other manufactures besides cotton, with all the varieties of minor erections, called for by the trade of the city, and for the accommodation of its population.

"The advances of the number of the population, has, in consequence of the progress in manufacturing enterprise, been singularly rapid. So recently as the year 1813, the first impression seems to have been made on the original wilds. In 1830 the population was 6,474; in 1840, 20,796—having been trebled in ten years; and in 1844 it was estimated at 25,000. Anxious to see as much of Lowell as my time would enable me, I obtained through a very kind and attentive friend, Amos Lawrence, Esquire, of Boston, a previous arrangement for my visit there. And accompanied by another gentleman, William Appleton, Esq., himself a considerable proprietor in the works there, I obtained most fully my desired object, and visited this place, so interesting on account of its manufacturing system and operatives, with the greatest possible advantages.

"The distance by rail road, 26 miles, is accomplished in about an hour and ten minutes. The railway, different from any other which I had before travelled on in the United States, consists, like ours, of a double line—and is durably constructed, being laid on foundations of granite. Its cost was 1,834,893 dollars, equal to 70,573 dollars, or upwards of £14,000 a mile—a very unusual expense for an American railway. It well answers the purpose, however, to the proprietors, having paid so long ago as 1841, 8 per cent dividend.

"On entering Lowell a stranger is naturally struck, with the contrast presented by that place, to an English manufacturing town. Here in Bradford, for example, every building is of stone or brick, solid, substantial, with little of the freshness that might be looked for in so rapidly an increasing town; there, in Lowell, though the mills and boarding houses are generally of brick, the chief part of the other buildings, houses, hotels, and even churches, are of wood, and nearly the whole as fresh looking as if built within the year. Here, with us, every thing is externally discoloured with smoke; buildings, streets, and causeways, alike bearing a sooty covering; the mud in the streets, in colour and consistency, like blackish gray paint, and the air of Heaven darkened as by a dense cloud. There nothing is discoloured, neither houses, nor mills, nor trees—the red brick factories and boarding houses, and the other edifices of wood, painted in light colours, look as fresh as if just finished; the streets, dusty enough indeed, were yet not black like ours; and the sky, unshrouded by smoke or cloud, was brilliant and clear; the sun darting down its unobstructed rays with dazzling and scorching power. The trees and plants which, with us, soon become dingy after their foliage bursts out, and which, in some places, as in the churchyard of St. Peters, being ever leafless, appear like the black stumps of the forest in America, the residue and remains of the fire—there, in Lowell, were fresh and flourishing; the trees, with which some streets or wide precincts were screened and adorned, being verdant in their summer's foliage, and the neatly kept gardens, here and there seen, about the factories, being amply adorned with floral beauty. Hence, as to Lowell, large as it has grown, it is yet rural in its appearance, and notwithstanding its being a city of factories, is yet fresh and cleanly.

"Soon after arriving at the railway station at Lowell, we were joined by a gentleman, Mr. Samuel Lawrence, a principal in a large woollen factory, who had been expecting us, and we had also the assistance of the manager of the cotton mills of one of the principal corporations. We proceeded to one of the factories, that we might see the factory workers as they came out to their dinners. And to a stranger it was an interesting sight. Several hundreds of young women, but not any children, issued from the mills immediately within view, altogether very orderly in their manner and very respectable in their appearance. They were neatly dressed and clean in their persons: many with their hair nicely arranged, and not a few with it flowing in carefully curled ringlets. All wore, being the height of summer, a light calico covered bonnet, or sort of caleche, large enough to screen the face, and with a dependent curtain to shield the neck and shoulders. Many wore veils, and some carried silk parasols. By no means a few were exceedingly well looking—more pallid than the factory girls with us, and generally light in their figure. There was not the slighest appearance of boldness or vulgarity; on the contrary, a very becoming propriety and respectability of manner, approaching with some, to genteel. They had not far to go for their refreshment—their boarding houses, in which most of them were lodged, being generally contiguous to the factories wherein they were employed. No such thing is ever to be seen among the young women of Lowell as rudeness, and very rarely, I believe, any thing like levity, or immodesty in the streets.

"The mills, in their general appearance, much resemble ours, except that they generally looked smaller than our Bradford factories, and are built of brick instead of stone. They constitute an extensive range near the river side, but so planted, as to receive their share of water as conveniently as may be, from the different canals, by which water power is supplied. Generally, I think, they are from four to five stories high—besides a floor in many of them in the central part of the roof. There were twenty windows in a row in the front of one of the mills of four stories, which I more specially noticed.

"Long ladders, attached to the outside of the buildings, in some cases not less than four or six, extending from the ground to the roof, particularly excited my attention. These were fire escapes, so arranged both on the sides and at the ends of some of the buildings, as to afford the means of escaping outside, independent of the stairs, which are of wood, from every floor, and almost from every subdivision of the factory. In some cases the ladders ran quite over the roof. The object of this might be to facilitate measures for extinguishing fire—an object, indeed, which the ladders would generally subserve.

"Every thing about the mills is characterized by cleanliness and neatness. Nice, tastily laid out gardens, or plots of grass, with trees and shrubs, adorn the enclosures of many of the factories; and every thing is strikingly fresh and fair.

"On the recommencement of work after dinner, we went into, and all through, the adjoining cotton factory. The interior, except in the departments used for the first steps of their operations, which are necessarily dusty, corresponded in neatness and cleanliness with what the outside had indicated. The floors and stair cases were beautifully clean—and the stairs painted, except a space, as if *meant* for a stair carpet, in the middle. The windows were ornamented, in some of the departments, with plants, set in flower pots, the property of the girls, who seemed to have a taste for their cultivation, and a pride in keeping them nicely.

"The carding, spinning, and weaving of cotton, were all carried on in the same building. About 250 hands were employed (perhaps the average number) in the first mill I examined—but a woollen mill of Mr. Lawrence's had nearly 800.

"The young women observed at work in this cotton mill were all above the age of children; I supposed, generally, they were from fifteen to twenty, though many were much older; and some few, I believe, were married women. I afterwards learned that the average age, was about twenty-three years. The great majority were from the country; but on this point, as well as that of the case of children, I shall speak hereafter. On almost every floor of the factory, I conversed with one or more of the females at work. In all cases their manner was easy and unaffected; modest and respectful. In many of them there was an intelligent and rather refined expression of countenance, characterized in some with a cast of thoughtfulness.

"We have the results of the thoughts of many of them printed—yes! printed in a periodical called the Lowell Offering."

Here Dr. Scoresby introduces one or two stories extracted from the Lowell Offering, taken from a small volume published in London, called "Mind among the Spindles," which we shall omit here, as we shall take occasion to advert to the Lowell Offering on a future occasion, and present some extracts which have not yet been published. We also pass over many of the Doctor's remarks, as not exactly suited to the nature of this work, and shall now copy what he calls his Statistics of Lowell—which we give without vouching for their correctness, though we doubt not they are sufficiently so, as the Doctor must have received them from an authentic source. The Doctor thus proceeds:—

"It yet remains that I should give you a summary view of the statistics of this interesting and greatly thriving city. And that you may duly estimate its progress, you will please to bear in mind the fact, already stated, that it is almost entirely the growth of a period of about two-and-twenty years.

"The corporations or companies for the manufacture of cotton and woollen goods, but chiefly of cotton, which is the staple manufacture, are ten in number—these corporations being the proprietors of thirty-two mills, besides printing works and other manufacturing concerns. Their total capital is $10,650,000, or about £2,200,000 sterling. The total number of hands employed by these several companies at the commencement of last year, 1844, was stated to be 6,295 females, and 2,345 males; but in August last, I was told that the number of girls and women was about 7,000. The whole of the spinning works run 201,076 spindles for cotton and wool. The number of looms was 6,295 at the time mentioned; but they have since, I believe, been considerably increased.

"The rate of production was 1,425,800 yards of cloth weekly, or 74,441,000 yards annually. Nearly twenty-three millions of pounds of cotton were wrought up or consumed in a year. The medium produce of a loom in weaving of thread or yarn, No. 14, is forty-four or forty-five yards a day; and of No. 30, thirty yards.

"Of the texture of calicoes, &c., here produced, it will be found that each spindle yields sufficient yarn for a yard and one-tenth per day.

"The principal kinds of goods manufactured at Lowell, commencing with the largest quantities, are sheetings, shirtings, printing cloths of Nos. 14 to 40, drillings, carpets, broad cloths, cassimeres, &c. The production in dyed and printed cottons was, in January, 1844, 273,000 yards weekly. The factories are heated with steam or hot air, for which object, and other purposes connected with the factories and print works chiefly, 12,500 tons of anthracite coal are used annually, together with 3,290 cords of wood. The oil required for the machinery and wool, amounts to 67,849 gallons a year. The diameter of the water wheels made use of for working the machinery, varies from 13 to 30 feet; and the width of wheels varies from 21 to 60 feet.

"To the principal establishments already enumerated, may be added the Lowell water-proofing concern, the extensive powder mills, the Lowell bleachery, flannel mill, batting mill, paper mill, card and whip factory, grist and saw mills, &c. &c., together employing about 500 hands, and a capital of half a million of dollars.

"The lock and canal company, which supplies the water and arranges the canals and branch aqueducts, also takes the work of erecting mills and constructing the machinery. In times of active operations, it employs from 1,000 to 1,200 hands. As to the statistics of population, I need only mention, in addition to what has been stated, a remarkable circumstance arising out of the influx of young women coming *alone* from the country—that of the 25,000 persons, estimated population of the city, more than one-half are represented as being betwixt the ages of fifteen and thirty years. Of other statistics, I may just name that there are no less than twenty-two places of public worship, comprising the ample variety of ten different denominations in this youthful city. There are Sunday schools and daily schools in full measure, I believe, proportionate to the youthful population. And besides all the variety of literary and mutual improvement institutions, and the libraries for general reading, there is a supply of periodicals of the newspaper class, which to an Englishman, appear quite curious; though, to an American, the variety in such publications would not be deemed extraordinary. Thus Lowell, for the amusement of its 25,000 of total population, produces one daily newspaper, two thrice a week, and six weekly, besides the clever periodical conducted by the factory girls, the "Lowell Offering," which is a monthly publication. In the whole nine newspapers—some of them, I apprehend, small in quantity, whatever may be the quality—yet constituting a supply for the reading of the masses, which presents a curious contrast to the public press in some parts of this country—in Bradford, for instance, where we have one newspaper, with a second edition weekly, for 60,000 population, in the town and its precincts, and 120,000 perhaps in the parish."

The Doctor here introduces another extract from the "Lowell Offering," which, after reading, he goes on to say:—"Now which of our factory operatives could write such a description and story as that? Yet why should they not? Are they inferior in natural intelligence or in mental abilities to their sisters—almost their own sisters—of New England? Or if not, is there anything essential to their state or employment that should hinder them from, at all events, aspiring to an improvement in their condition? Certainly there is not."

Speaking of their moral condition, the Doctor says:—"Long before I thought of visiting the United States, I had heard a surprising account of the superiour character of the female factory operatives at Lowell. In certain books of travels I had seen them described as something so extraordinary in character and mind—in purity and religion—that but little knowledge of human degeneracy was sufficient to justify the questioning of the accuracy of such representations. The descriptions, indeed, appeared evidently those either of very partial witnesses, or of those but little acquainted with the common nature of humanity; or else of writers so singularly indiscriminating as to fancy that outward appearances and pretensions were real proofs of the condition of the heart.

"My own impressions, therefore, was, that these females were greatly overrated, and the descriptions of their moral character excessively exaggerated. This was an inquiry, therefore, of much interest and importance; for if the assumed superiority were proved to exist, it might naturally stimulate our Christian philanthropy to seek to make the example profitable. These preliminary remarks I have been induced to make to show that my inquiries on this subject were likely to be made with caution; and having heard not only doubts expressed, whilst I was in America, about the prevailing idea thereon, but found that severe attacks upon these very girls, had been made in certain respectable journals of that country, my previous caution was naturally increased.

"The effect of all this was, that I expected to find the female operatives here not very different, in their actual moral condition, from what we find them elsewhere; but, as you will soon learn, from what I have further to say on this subject, this expectation did not agree with what I now believe to be the fact.

"From all the information I could obtain, tested by all available means and received with all reasonable caution, I have been led to infer that their character and moral conduct are unusually high. Not, indeed, that the impressions calculated to be conveyed by certain published statements, already referred to, were or could reasonably be expected to be verified; not that instances of failure did not occur, nor that such were so rare as to be almost unknown; not that these factory girls were free, either from the passions or the vices of their class and sex elsewhere; but still, that after every allowance, their general *moral character*, as an entire class, appeared to be left in a very superiour and commendable position. And from information derived from sources unconnected with the factories—such as from those who watch for their spiritual interests, and care for their souls—the same conclusion was arrived at. The ultimate reply to my inquiries on this subject was to the effect, that 'we are very thankful if we can keep up the standard of morals so as to be equal to what prevails amongst other young women of New England.'

"Dr. Bartlett, a medical practitioner of Lowell, in no way interested, he tells us, in any of the factories, has come forward in a manly, and I think satisfactory, pamphlet in vindication of the character and condition of the females employed in the Lowell mills. The statistics introduced for refuting the charges that had been publicly made, are very interesting, and on some of the points eminently conclusive."

The Doctor goes on to inquire into the causes of *the superiour moral and intellectual condition of the Lowell factory girls*, but in this we cannot afford space to follow him further than to give the first sentence of that chapter, which is in the words following:—

"Concluding as we must do, if the foregoing researches and observations be at all correspondent with the facts, that the intellectual, moral, and religious condition of the female operatives at Lowell is of a very unusual and superiour order—the inquiry as to how these beneficial effects are produced, becomes as interesting as it is important."

We must here conclude this, to us, very interesting account, given by a distinguished stranger, not because there is not much more in the book that is well worthy of our columns, and of the serious and best consideration of our readers; but much has been already published on the subject, and as we doubtless shall hear from the city itself before very long, and give a full detail of its statistics, we think what we have extracted from this work will be deemed sufficient for the present. We cannot, however, leave the subject without the remark, that no one can tell the good effect that may result from the well-attested fact of the excellence of character prevailing among the young women of Lowell, having attracted the attention of the philanthropists of Europe, in the amelioration it may cause in the condition of their sisters (as the Doctor calls them) employed in the same vocation there; and the proprietors and those employed at Lowell may well feel a just pride, that while the object which called that city into existence was undoubtedly the accumulation of wealth, yet this has been done in a manner to contribute to the present happiness of those engaged in it, by a due attention to the far higher and nobler aim, the preservation and elevation of their moral character.

THE IRON TRADE.

The influence which the manufacture of iron now exerts, upon the industry, agriculture and commerce of this country, is so interesting a subject of reflection, that I need offer no apology for its consideration.

This precious metal, as has been beautifully expressed, "accomodates itself to all our wants, our desires, and even caprices; it is equally serviceable to the arts, the sciences, to agriculture and war: the same ore furnishes the sword, the ploughshare, the scythe, the pruning hook, the needle, the graver, the spring of a watch or a carriage, the chisel, the chain, the anchor, the compass, the cannon, and the bomb,—it is a medicine of much virtue, and the only metal friendly to the human frame." This universality of use has been met, by a kind Providence, in furnishing it in inexhaustible quantities over almost the entire face of the globe, and this circumstance will do much for the peace and prosperity of this country. For if the iron ores or iron stones, were not found to exist, in almost every State in the Union, in equal quality and abundance, the value of this manufacture, as a source of national wealth, would be entirely disregarded, and weigh but little against the jarring interests of sectional feeling. These rich and inexhaustible masses of iron ores traverse the country, from Maine to Georgia, and may be worked with great profit, in every locality—Providence having distributed his favours, not only with a profuse, but very impartial hand.

First, we have the great *productive* or magnetic region—the magnetic oxides—imbedded in our South mountains, in vast and rich forests of timber, and whose humble elevation renders it accessible in all directions —running in gigantic measures, from Maine to Georgia, from north-west to south-east, parallel to the coasts of the Atlantic Ocean; and in no States do they exist, more abundantly, richer, or in greater variety, than those of South Carolina and Georgia.

Second, at the base of this range of mountains throughout the same extent of country, and in its soft and fertile limestone valleys, we find the brown and yellow hematites and pipe ores, scattered in rich abundance, reposing upon their limestone beds, and in juxtaposition with all the materials necessary for their manufacture.

Third, our fossiliferous deposites—opened out extensively in Pennsylvania and Tennessee, and although more remote from the Atlantic border, are placed amidst immense forests of timber.

Fourth, the argillaceous ores of the coal measures—so precious, from their association with the coal—that, similarly situate there, furnish nearly the whole of the enormous product of Great Britain.

Fifth and lastly, our iron mountains of the far West—and of all these measures and deposites, there is not one of these classes, that would not furnish iron enough for the entire world.

With this wealth, thus diversified, Nature has done her part, and with *the policy now established*, art will soon combine with her, in giving to this manufacture, that preponderance and perfection to which it is entitled by its general utility.

All civilized nations have fostered and protected the manufacture of iron with the greatest care, as essential to national independence and all the refinements of civilized life—so much so, that it has been received as an axiom, that the degree of civilization attained by any nation, may be ascertained by the quantity of iron it consumes. Sweden, as early as 1740, established a bank to promote the production of iron, by lending money upon the ore, at four per cent., and the Bank of Stockholm receives to this day, (we believe,) the metal as a proper security for a loan. The iron being duly appraised and lodged in the public warehouse, the proprietor receives three-fourths of its value, at the interest of three per cent, and when he can find an opportunity to dispose of his iron, it is again delivered to him upon producing a certificate from the bank, that the loan has been discharged.

These facilities soon established this trade upon a firm footing in that country, and enabled it to draw largely of the wealth of Great Britain, until her citizens complained of this drain of her precious metals—which hard money, they contended, was laid out again directly, with the enemies of Great Britain—the French. At this period, England ranked among the free trade nations, and exported her corn to the Netherlands, in exchange for their wrought commodities, and bought largely of iron (from 60 to 70,000 tons per annum) from Russia and Sweden, although she was so rich in the treasures that lie beneath the earth's surface. But so little were those treasures prized, that Mr. Anthony Bacon, as late as 1783, disposed of his "mineral kingdom," by leases to different parties, at rents so low, that no value could have been attached to it; and that mineral kingdom was "the famous *Merthy Tidvil,*" which now forms the centre and seat of the iron business of England. Sir John Guest, Lewis & Co., at Dowlais, hold their lease at a royalty or rent, for coal and iron stone, at £99 per annum, and this lease they have enjoyed for nearly 99 years, (97.) This unrivalled establishment consists of nineteen furnaces, in full activity, and a rolling mill, manufacturing most of it into bar-rails and rods. Mr. Crawshay enjoys a similar lease, which has 27 years yet to run, and for which he pays £100 per annum, and manufactures nearly as much metal as Sir John Guest & Co. The duty on foreign bars was then less than £2, which was gradually raised, in 1804, to £5 1*s*. per ton. In 1805 it was proposed to reduce this duty (a higher duty than that now enjoyed by this trade under our bill of 1842,) to £2; but it was resisted by the iron trade, and the memorials presented by deputies selected by the trade, represented that such a duty would not protect the British iron master, and be most disastrous to the trade—the consequence of which was, the retention of that duty and its gradual increase up till 1825, when it reached £7 18*s*. 6*d*., or $39 62 1-2.

In 1805	Duty	£5	1	0	Production—Pig Iron
1806 to 1808	"	5	7	5¼	.... 258,000 tons.
1809 to 1812	"	5	9	10	
1813 to 1818	"	6	9	10	
1819 to 1825	"	7	18	6	.... 581,367 tons.

And it was this firm, uniform and consistent protection, that was extended to this trade, under all administrations, whether tory or whig, in peace or war, that gave it its present vigorous growth and now renders it independent of the helping hand of government. If we contemplate, for a moment, the progress of this manufacture in England, we shall find in it the most powerful vindication of a protective tariff. This sea-girt island as late as 1805, we see, was undersold in iron, by Sweden and Russia, although she possessed a marked superiority of natural advantages for its manufacture—her mines of iron and coal being inexhaustible, and their associations in many localities being such, as are not to be found in any other country upon the face of the globe. But from the moment (1805) a vigorous protection was adopted, and the hand of government wisely extended, we may date its present extensive and flourishing condition; for although the splendid discoveries of Cort, for both the puddling and rolling of iron, had been introduced twenty years before this period, yet very little progress had been made in the business. After this, however, the mind and enterprize and capital of England were devoted to it, and it was soon found to be a branch of business that called for the highest exercise of the mind and for the most laborious physical efforts; every step of this great business, after the introduction of the mineral coal, was attended with difficulties that appeared almost insurmountable, and nothing overcame them but the patient, untiring industry of English labour for twenty years; and many were the experiments made, and thousands of tons of bad iron were the results; but experience and science triumphed, and the production in 1806, of 258,000 tons, was swelled to the astounding quantity of 1,500,000 tons in 1843.

This astonishing progress and developement enabled her statesmen, in 1825, in consequence of the maturity of the manufacture, and its ability not only to sustain the most formidable competition in price and quality, but to force her product into every corner of the globe, to propose a reduction of duties, and by *the consent* of *the trade*, the duty was reduced from £7 18*s*. 6*d*. to £1 10*s*.:–the iron trade being represented in Parliament by Alderman Thompson, who was largely interested in this business, and who expressed himself favourable to the measure. This was the certain and inevitable result of the wise policy of building up her establishments by protection, through which public confidence was established, and under its influence every business facility which money could give, was secured; her internal navigation was perfected, so that not a town exists, where any considerable manufacture was carried out, nor a mine, where any mineral could be extracted, which does not communicate by water or railroad, with that point, where those commodities can be disposed of with the greatest advantage. To illustrate this, on the Glamorganshire Canal, of 25 miles in length, which penetrates the coal and iron districts of South Wales, the dividends of which were limited to ten per cent., so enormous was the traffic, that after affording every possible facility to trade that the dimensions of the work would admit, reducing the tolls to a *minimum*, keeping it in good repair, paying liberal salaries, &c. &c., yet *periods* existed every year, when the navigation was *declared free*. To form some idea of these facilities, the Marquis of Bute has lately expended $1,500,000, at his sole expense, to improve the harbour of this canal. It is this kind of expenditure in roads and canals, and in all descriptions of interior communications, that has made this great nation, for half a century, the workshop of the world; and what could have called forth those vast means and resources, but the admirable consistency with which she has maintained the protective system, and from which her most splendid triumphs have resulted? In 1825, when the duty on iron was reduced to its present rates, a great flourish was made by the Chancellor of the Exchequer, "against this narrow, selfish policy" of opposing the introduction of a *foreign article*, and stating that one of the objects, which he had in view, in removing those high prohibitory duties, was to set other nations an example of this liberal policy. This speech was intended for the American market; but how far has that nation since carried out these free trade notions and the practical application of this enlarged commercial knowledge? Twenty years have now elapsed, and what has the Duke of Wellington lately said in Parliament? "That when free trade was talked of as existing in England, it was an absurdity—there was no such thing as free trade in that country. We proceed (says he) on the system of protecting our own manufactures and our own produce, the produce of our labour and our soil; of protecting them for exportation, and protecting them for home consumption, and on that universal system of protection it is absurd to talk of free trade." And these sentiments were afterwards more strongly expressed by Sir Robert Peel, and confirmed by a most decisive vote in the House of Commons, in May, 1843.

The developement of her iron and coal, within a quarter of a century, has conferred upon England more benefit than all the other branches of her productive industry combined. It has stimulated all the industrial arts. Of what benefit, comparatively, would have been the brilliant inventions of Watt, Trevithick and Stephenson, and the blessings they have conferred upon the whole human race, without coal and iron at cheap rates? The steam engine would have been almost *inoperative* as a moving power, for it is with the aid of coal and iron, that this "mighty engine penetrates the bowels of the earth, opening up the vast mines, clearing them of water, and snatching from the earth the boundless mineral wealth deposited there by nature; and all this accomplished within weeks, to depths which would have required centuries of painful labour." Of how many millions of workmen has this engine supplied the place? and yet its achievements are nothing in comparison with its promises for the future. In England it is already estimated as performing the work of four millions of men; it has almost changed the face of the globe; and having triumphed upon the water, it has only begun its practical results upon the land. A system of railways has just been commenced, and thus we find, that "whether we choose to transport ourselves or our productions across the mighty currents of the ocean, in vessels made of wood or iron, and wafted over its bosom by the winds of heaven, or in others, taught by steam to 'walk its surface like a thing of life,' they are still dependent upon *iron;* and for locomotion on land, it matters not however rude, or finished, the means of transit we avail ourselves of, we must still have iron, iron, iron." This trade is now the great source of wealth to England, and on which the larger portion of her population is directly or indirectly concerned, employed or supported—"giving the poor labourer his daily food, the rich aristocrat his lordly possessions, the government her revenue;" and the sphere of demand for the article is every day widening; the time has already come when nothing but iron boats, iron vessels and iron cars, iron houses, iron bridges and iron railroad superstructures, will satisfy the economy of the public or the competition of the trade.

In January, 1844, England manufactured 1,578,260 tons of pig metal, and raised thirty-five millions of tons of coal per annum, and the price of bar iron was reduced to £5, $25, and yet this was the effect of "this narrow and selfish policy," to increase this manufacture within fifty years, from 13,000 tons of pig metal and 600 tons of coal, to one million and a half of tons of pig metal and thirty-five millions of coal, and to have reduced her bar iron from $116 per ton, to $25, and her coal, no doubt, in the same proportion; as the prodigious make of this year, far exceeded the demand, the prices were brought down so low as not to remunerate the trade, and the consequence was, large and extensive failures, and the stoppage of some of the best concerns. Every joint stock company in the kingdom failed, and many private operators of long standing and great wealth. Among these, the Messrs. Harford, Davis & Co., who employed more than 6,000 persons; the Great British Company, that had invested seven millions of dollars; the Victoria Iron Company, the Rhyming Company, and others, so that home competition had effected too much. To sustain themselves for some years before, they were obliged to carry out their severe and rigid economy still further, and to reduce wages to the merest pittance—not enough to provide the labourer or workman with the food necessary for himself and family. But as this is the lowest point of the wheel, we shall, before proceeding to consider our home trade and its progress, and reviewing the policy of the government in relation to it, give an estimate of the cost and consumption of the different materials and labour of a ton of pig metal and common bar iron in England, so that we may, at the proper time, institute a comparison between this and the American labour and cost of materials. It may also be useful to give a comparative estimate of the consumption of the same materials in 1800, or thereabouts, in Scotland, that we may judge of what has been accomplished. To produce malleable iron, in its pure state, with an abundance of charcoal, was an easy operation; but to furnish it at cheap rates was only the work of time, and the great advance of chemical science; and if we should examine the many and various processes adopted within the last forty years, we shall be lost in admiration at what has been accomplished, and how much this reduction of price has promoted all the social comforts and happiness of our fellow-creatures.

SCOTLAND.

Quantity of materials required to make one ton of Pig Iron, at Clyde Blast Furnace, No. 1—*in* 1797—*Black Band*—(*see Mushat.*)

	Tons.	cwts.	qrs.	lbs.
Coals, for coking,	8	11	2	0
Do. engine,	4	14	0	0
Ironstone,	3	4	0	0
Iron ore,		1	1	0
Limestone		18	2	8
Tons,	17	9	1	8

In June, 1826—

	Cold air and coke.			
	Tons.	cwts.	qrs.	lbs.
Coke,	3	0	3	0
Mine, (calcined ironstone,)	1	15	0	0
Limestone,		10	3	0
Tons,	5	6	1	0
Engine,			10	

In 1831—

	Heated air and coke.			
	Tons.	cwts.	qrs.	lbs.
Coke,	2	0	3	0
Mine,	2	0	3	0
Limestone,		10	3	0
Tons,	4	12	1	0

In 1839—

	Heated air and raw coal.			
	Tons.	cwts.	qrs.	lbs.
Coal,	1	14	2	0
Mine,	1	15	0	0
Limestone,		10	1	0
Tons,	3	19	3	0
Coal,	1	8	3	0
Mine,	1	14	1	0
Limestone,		3	3	0
Tons,	3	6	3	0

The average product at the Clyde, with cold air, was about 40 tons per week; with heated air and coke, about 60 tons; and with coal, about 80 *tons*, and *now*, 120 tons.

The great improvements which produced these results were—

1st. The system of coking under wetted dust.

2d. The enlarged capacity of the blast furnace, and the proportionate increase of the quantity of atmospheric air thrown into it.

3d. The use of raw coal.

4th. The introduction of the use of the hot blast in smelting.

IN WALES.

Expenses of making Iron, as per statement (*of one of the best establishments*) *of January 23d*, 1843.

	Tons.	cwts.	qrs.	lbs.		s.	d.	s.	d.
Pig Iron—Ironstone,	1	11	1	0	*a*	12	0	18	9
Cinders,		12	2	0	*a*	6	8	4	2
Coal, raw,	1	13	3	0	*a*	7	0	11	9
Do. Engine, bote and slack,	1	11	1	0	*a*	3	4	5	2
Limestone,		11	1	0	*a*	5	4	3	0
General charges,								6	0
Wages on the ton,								6	3
							£2	15	1

October 28th, 1843.

	Tons.	cwt.	qrs.	lbs.		s.	d.	£	s.	d.
Ironstone,	2	0	0	0	*a*	10	0	1	0	0
Cinders,		5	0	0	*a*	5	0	0	1	3
Coal,	1	10	0	0	*a*	6	0	0	9	0
Bote and slack,	1	11	1	0	*a*	3	4	0	5	2
Limestone,		12	2	0	*a*	4	8	0	2	11
General charges,								0	6	0
Wages,								0	4	6
								£2	8	10

	Tons.	cwts.	qrs.	lbs.		s.	d.	£	s.	d.
Bar Iron—Pig iron to puddlers, as per January statement,	1	1	10	0	*a*	55	1	2	18	1
Coal,	1	6	1	0				0	6	1
General charges,								0	5	0
Wages,								0	11	0
								£4	0	2

	Tons.	cwt.	qrs.	lbs.		s.	d.	£	s.	d.
Pig iron, to puddlers, as per statement of Oct. 28th, 1843,	1	1	1	20	*a*	48	10	2	12	5
Coals,	1	9	0	0	*a*	4	2	0	6	0
General charges,								0	5	0
Wages,								0	10	5
								£3	13	10

CRAWSHAY ESTABLISHMENT, (South Wales,) in 1844.

	Tons.	cwts		s.	£	s.	d.		
Pig Metal—Ironstone,	3	0	*a*	6	0	18	0	$4	50
Coke,	1	15	*a*	8	0	14	0	3	50
Limestone,	1	0	*a*	3	0	3	0		75
Wages,					0	6	0	1	50
General charges,					0	6	0	1	50
					£2	7	0	$11	75

Refining.

Plate—22½ cwt. pig metal,		$1	47		
10 cwt. coke,	at 8*s.*	1	00		
Refine,	at 1*s.* 3*d.*—		37½—	$2	84½

Puddling.

		s.	d.	$	c.		
Common bar iron—20¾ cwt plate,					58		
58 cwt. coal,	at		5	1	12½		
Wages,	at	6	6	1	62½		
Shingling do.,	at	1	9		43		
Rough rolling,	at	1	2		29		
Cutting and weighing,	at		9		18		
Mill heaters,	at	1	6		37½		
12 cwt. fuel,	at	5	0		75		
Roll and straight,	at	5	6	1	37½		
Cropping ends, weigh and stack,	at	1	0		25		
Wear and tear,	at	5	0	1	25		
Labour for clearing away ashes,	at	1	6		37½—	8	60½
				$23	19	$23	19½

Pound sterling considered $5.

A little reflection upon these estimates will satisfy any intelligent mind that no country upon earth can surpass that nation in the manufacture of iron, for where will he find labour more productive and efficient, and machinery more perfect; and it is all the wages of labour—step by step, giving employment to every description of persons. The coal and ore, and limestone and fire clay, as we have shown by the leases referred to, are almost valueless. Invention may co-operate with nature, and she may bestow her gifts with the most lavish hand, but we cannot dispense with labour; and it is this cheapness of labour that enables their manufacturers yet to procure their fuel at a price that defies the competition of the world; although worked to great depth below the surface of the soil—say 3,000 feet—yet it is procured at a less price than from our virgin hills. Nothing can be more interesting than the English coal fields, many parts of which *are yet untouched.* The great Welsh coal basin "commences at Clydach, in the east, *with rich* bituminous coals, which give out clouds of smoke that only terminate in the *anthracite* region of Neath—presenting a change gradual and progressive, for twenty-five miles, occupied throughout by furnaces." This anthracite district, which is from sixty to seventy miles long, by six to eight broad, and abounding in lime and iron stone, is one of those fields almost untouched. Independent of this cheapness of labour, is the admirable system with which it is managed. All the workmen are paid upon the ton, and have therefore an interest in the well-working of the furnace, and are disposed to watch carefully all its operations. This community of interest secures the best results, and excludes all drones from the hive; and to stimulate it further, a dismissal from one establishment, excludes the workman or labourer from all others. In this comparison of forty years and upwards, how immense a saving of the materials used, has the mind of man brought about! Let us estimate it in one single establishment in Scotland. The Messrs. Baird & Co. have in active operation twenty-two furnaces, producing an average of 2,000 tons per week of case iron.

Quantity of materials in 1797—On 104,000 tons of pig metal, at 17 1-2 per ton, 1,820,000 tons.

In 1839—On 104,000 tons of pig metal, at 4 1-2 per ton of iron, 468,000 tons.

The period at which the manufacture of iron was introduced into the United States is uncertain, and cannot be ascertained from sources to be relied upon. It is, however, sufficient for our purposes, that we may date it as early as 1715, as exportations were made in 1717, and show that our establishments were not only able to supply the home demand, but to export, *under duties*, to the mother country, *enough* to excite her jealousy. In 1719 an act was introduced into the House of Lords to prevent the erection of rolling and slitting mills; but was rejected. The memorials and petitions upon this occasion are curious and interesting. It was alleged, that if the duties were remitted, English iron would be undersold by the American, and British establishments, which were erected at great cost and expense, would be destroyed, to the ruin of many thousand labourers, because of the advantages which the greater plenty and cheapness of wood would give to the American manufacturer. These petitions led, however, to the most animated debates, and an act of Parliament was passed in 1750 forbidding us, under a heavy penalty, to erect any rolling or slitting mill; but removing all duties upon pig metal. The pig metal exported this year was 3,425 tons, and 390 tons of bar iron, and we were, beyond doubt, considered a formidable rival in this branch of business.

It was, no doubt, the cheapness of wood and the high price of iron in England that stimulated the trade here, for up to this period, as we have shown, England had made but little progress in this business, producing only about 17,000 tons of pig metal; and it was not until 1760 that a water wheel was erected to propel the cylinder bellows, and in 1778, after the substitution of the cylinder blowing machines for twenty-eight years, and Watts' steam engine for nineteen years, we have their charcoal furnaces only producing an average product of 546 tons per annum, and their mineral coal and iron stone lands so lightly appreciated.

It is, therefore, certain that our forefathers did introduce into this country as much skill as prevailed at that time in England, and being permitted to enjoy, from 1750 till 1776, the English market free of duty, it was during this period that this manufacture took such deep root in our country; for in Pennsylvania, New York, New Jersey, and Maryland, furnaces were erected before this period, that were blown by bellows propelled by water wheels, and producing a greater annual product. Indeed, their construction and size in 1788 was not much inferior to many of the charcoal furnaces of the present day. On this subject our information is positive and conclusive. It may, however, be interesting, in tracing the history of this manufacture, to give some of the particulars of these early establishments. The seat of their first operations, in Pennsylvania, New Jersey, and New York, were in the south mountain ranges, in the midst of those gigantic measures of the magnetic oxides, to which we have before referred. The Reading furnace, in Berks county, Pennsylvania, was built in 1730, and the Warwick in 1736; and the latter stack has remained unchanged until the present day, except reducing her size in the boshes from nine feet in diameter to seven feet, and consequently reducing also the make of iron. This stack is of the ordinary size of those now erected. Both of these furnaces were blown by the long wooden bellows, and yielded from twenty-five to thirty tons per week. The Cornwall furnace, in Lebanon county, Pennsylvania, so famous for having enriched all its late proprietors, was built in the year 1741–2, by Mr. Peter Grubb, then of Chester county, Pennsylvania. The stack was 32 feet high, and 21 1-2 feet square at the base, and 11 feet square at the top. The bellows were 20 feet 7 inches long—5 feet 10 inches across the breech—and 1 foot 2 inches at the insertion of the nozzle. It was blown for the first three years by Mr. Grubb himself, and then leased, on the 11th of June, 1745, with 650 acres of land, and the Hopewell forge, with 218 acres of land, to *twelve persons*, for twenty years, at a rent of £150 per year, or $633 13 1-3. They carried it on as the Cornwall Company for a few years *only*, and assigned their lease to Jacob Giles, a Quaker gentleman of Baltimore, Md., who kept the works in active operation until the expiration of the lease.

In 1765. Peter Grubb removed to this estate, and resided at the Hopewell forge, which at this day was considered the most productive property. The Cornwall property remained in the family of the Grubbs, until 1798, when Robert Coleman became the sole owner, and realized from it and his other establishments, one of the largest fortunes in Pennsylvania. The price of pig iron at this establishment in 1780, was 300 pounds of continental money; in 1789, £6 10*s*., Pennsylvania currency, $17 33 1-3; in 1796, £10 10*s*., $28; and in 1800, £10, $26 67 2-3.

The Hopewell forge property is still retained by the Grubb family, and Peter Grubb, Jr., in 1786, built the Mount Hope Furnace, which was nine feet in diameter across the boshes, and yielded from 800 to 1000 tons of pig metal per annum.

The Mount Vernon furnace was erected in 1800, by Henry B. Grubb, and produced at that early day, from 50 to 52 tons per week, of good pig metal, for forge purposes, and made a continuous blast without blowing out, of twenty-eight hundred tons of pig metal. The rates of wages were less then, than at the present day, averaging about five pounds of Pennsylvania currency, or $13 66 2-3 per month—boarding included.

On the Sterling estate in Orange county, New York, a furnace was built in 1751, and is said to have produced annually 1500 tons of pig metal, which was worked up, upon the same estate, into bar iron. The great iron chain that crossed the Hudson river, during our Revolutionary war, each link of which weighed 140 pounds, was made there. Some of those links are still to be seen in the city of New York. This property passed into the hands of the Townsend family, before the Revolutionary war, and is still owned by them. Mr. William Townsend, who erected one of the furnaces upon this property, in 1777, is still alive, and able to give all the details of their early operation.

The books of the Hopewell forge have been carefully preserved from 1765, and they exhibit, we understand, a very accurate knowledge of the business, and in economy of fuel and yield of iron, will compare with the results of the same establishment at the present day. The iron masters of that period, were, no doubt, well taught in the practical working of their furnaces—devoting their entire time and attention to the business, and, without much knowledge of chemistry, were able to bring about the best results, where they possessed good ores. This is evident from the price of pig metal, which in 1789, was only $17 25 per ton. Their labour and wood were very cheap—the latter was so abundant, that it was procured in many cases for a nominal sum, from the necessity of clearing out the land for agricultural purposes.

It is manifest, however, from the entire history of that period, that our people displayed very early, a great aptitude, taste and fitness, for manufacturing industry of all kinds, and this awakened great jealousy upon the part of the mother country. Sir Josiah Child, in his discourse on *Trade*, written about the year 1660, expresses this feeling very strongly, but passes a noble eulogy upon the good people of New England; and although it was then prophecy, time has more than realized it, as the rich rewards of their virtue and *industry*. "I am now to write (says he) of a people whose frugality, temperance and industry, and the happiness of whose laws and institutions, promise to them long life, with a wonderful increase of people, riches and power; and although no one ought to envy that virtue and wisdom in others, which they themselves cannot, or will not practise, but rather to commend and admire it; yet I think, it is the duty of every good *citizen* primarily, to respect the welfare of his native country.*"

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* Contrast this noble and patriotic sentiment with the language lately used by the Hon. G. McDuffie, U. S. Senator, in a letter to the British Free Traders. "As a representative (says he,) of the exporting interest of these States, I *habitually* look upon

Owing, however, to the distraction and embarrassment occasioned after 1776, by our revolutionary war, and the sufferings which grew out of it, neither innovation or improvement could have been looked for for many years; for after the close of the war the distress and depression that was felt in all kinds of business was unparalleled—our arduous struggle had left us nothing but our indomitable spirit. Our commerce was destroyed, our specie drained, our trade annihilated, and the country overwhelmed with worthless money and a heavy debt; which money, so dearly earned, was exchanged at the rate of 5 and 6000 dollars for a ton of bar iron, notwithstanding that it had been made a legal tender, and in case of refusal, a forfeiture of debt. These sufferings had, however, the effect of giving us, what was much more important than the rapid advance of the iron business, a *National Government*; and the second act of the new Congress, passed almost unanimously, was an act for the protection of American manufactures; but unfortunately, the protection extended was totally insufficient for such a business as the iron trade—requiring large and permanent investments of money, and having to contend against a jealous and powerful nation. If it had been fostered and sustained from that day to this, by the same patriotic protection which prevailed in England, we would not now have required the aid of government. For it will be recollected that during *this period* the English duties *averaged* about $27 per ton, being higher than that which now so effectually protects this same branch of domestic industry, whilst our duties did not exceed fifteen per cent. It might have so happened that we should not only have been able to have supplied our own wants, but to have called forth again memorials from the citizens of England for the protection of their trade. It was, however, not the iron from England, but that from Russia and Sweden, that so materially affected and retarded this business, and prevented the employment of American capital. The English iron being made from pit coal, was, in the infancy of the manufacture, of very inferiour quality, and inapplicable to most of the purposes for which our iron was wanted; although it is now used (as we have before stated) for all the finer purposes—iron ware of every description, and the best tin plates.

It is, however, well worthy of remark and consideration, that although England, protected in her home market by an average duty of $27 per ton, and the use of mineral coal for half a century, the concentration of her capital in this branch of industry, and the perfection of all the improvements and labour-saving machines of that day, yet iron was not furnished to this country during that long period at less than $105 per ton; conclusively showing that we derived no benefit from our light duty, because the foreign manufacturer having the entire control of the market, exacted his own terms, and these terms were so regulated and adjusted, as that the price of iron should hold forth no strong inducements for the investment of American capital. For we find them watching us with a vigilant eye, and stating in their memorials, "that our labour, of all kinds, was much

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the prosperity of Manchester with as much interest and gratification, as I do upon that of Charleston or New York, and much more than I do upon that of Boston, which I am constrained to regard as the fruits of an unjust and oppressive system of legalized plunder, which confiscates at least one-fifth of the annual income of the cotton planters, to sustain a mercenary moneyed aristocracy of pampered and bloated monopolists."

dearer than in England, and the interest of money higher, which would always give a great advantage to the British manufacturer, and consequently, that no man, to bring their manufacture into that perfection in that country, (America,) will employ his money in this branch of trade, by which he cannot gain considerably more per cent. than is expected in England, where the interest is so low and profit so moderate." The prices were as follows, from 1793 to 1812:

From 1793 to 1797	$90 to $95	per ton.
to 1800	100 to 105	“
1801	100 to 120	“
1807	110 to 115	“
1810	115 to 120	“
1811–12	“ to “	“

These prices were sufficiently high to have built up this manufacture, if they could have been relied upon by our people; but what protection had they against the surplus product of that country? for the moment our capital began to be invested in it, prices would have been reduced without any sensible change in the cost of production.

Although our information in relation to this period, from 1783 to 1810, is very imperfect and limited, yet we are inclined to think that the trade kept pace with the consumption of the country. For in 1790, Secretary Hamilton remarked, that the manufacture of iron had grown with surprising rapidity; and we find from tables and documents, furnished by the Secretary of the Treasury to Congress, in 1806, that during the years 1802, 1803, 1804, we imported only a small quantity of nails and spikes, and exported largely of castings and manufactured articles, and this exportation continued down to 1807. This information being furnished with the view of ascertaining how far our trade would be affected by non-intercourse with England, may be relied on.

It is a branch of business in which the progress at all times ought to be slow and gradual, requiring a high degree of skill and experience, and much outlay of money. Furnaces and forges, and rolling mills, are not only to be built, but to be worked profitably; and correct and accurate knowledge is only the result of time and experience; it does not come by inspiration or absorption.

In 1810 the government made an effort to obtain accurate information through their marshals, and although the returns, in some respects, are very irregular and deficient, yet we have some data by which we can estimate the progress of this business. By this return we had 153 furnaces, producing 53,908 tons of pig metal; and 330 forges, manufacturing 27,057 tons of bar iron; trip hammers, 316; rolling and slitting mills, 34, requiring 6,500 tons of iron and 410 naileries, making 15,727,914 pounds of nails; and the value of all the different fabrications of iron, estimated by the Secretary of the Treasury at $14,364,526. With this progress the country had every reason to be satisfied, when we recollect that we had only a duty of fifteen per cent. to protect us against the product of the Old World and their accumulated capital and industry.

Up to this period the iron was manufactured exclusively from charcoal —from the smelting of the ores in the blast furnace to the finished bar in the forge fire; and it is therefore a period at which it may be interesting to stop and inquire, in a general way, its cost of production, and the modes by which it was manufactured, for it is not our purpose, at this time, to give more than a general account of the working of the furnaces, &c., reserving the minute details of the different processes of iron making—the mining of coal and the ores, and their character, for a future communication. They were as follows, viz:

1st. The production of pig metal from the ore, by smelting in the blast furnace.

2d. The conversion of pig metal into a malleable state, by the forge fire and hammer.

3d. The production of malleable iron direct from the ore, by the process called "blooming."

The furnaces up to this time were blown by wooden and leather bellows, and the cold blast, and one *tuyere*, and their working profitably was greatly influenced by the skill and experience of the founder; with the greatest skill and every precaution, the yield still depended much upon the blast, and as this was invariably produced by water power, which was often very irregular and weak, and in dry seasons incapable of furnishing the necessary power, it accounts for the small *average annual product* of the furnaces of that day. But the average of the best furnaces was from 20 to 25 tons per week, and it is from this make that we shall furnish an estimate of the cost and consumption of the different materials, and the labour per ton of iron, without entering too much into detail. The ores used were mainly the hematites and magnetic ores.

Materials.	Quantities.	Cost.
Charcoal	240 bs. at 3 cents	$7 20
Ore	3 tons at $2	6 00
Limestone		30
Labour		4 00
Incidental—wear and tear, &c.		2 50
Capital, estimated upon an investment of $50,000 for real estate, business, &c., and on a production of 800 tons to the furnace per annum		3 75
		$23 75
Profit for deterioration of estate, &c.		5 00
		$28 75

We consider this product, from 800 to 1000 tons, the very best limit as regards the economy of the fuel; for charcoal will not bear a strong or heavy blast without injuring greatly the operations of the furnace. This experiment has been fully tested, and therefore the only good effect of sufficient water and blast power, was to obtain furnaces of larger dimensions, and by building them high, sufficient time was allowed for the ores to deoxydise and carbonise, before they were subjected to the effect of the blast; and this, we think, might be carried much further than is yet done, with the best results. Why not increase these furnaces to 12 and 14 feet across the boshes, and by the increase yield reduce the cost of manufacture.. If an anthracite or bituminous furnace, 18 feet in diameter in the boshes, and 40 feet high, can be worked and managed to much greater profit than one of *nine feet*, why not a charcoal furnace? Some energy and effort may be necessary in procuring and preparing the necessary materials, but this requires only *labour*.

This metal was then sold to forges located in the neighbourhood of the furnaces; for few were wealthy enough to carry it throughout the entire process, and transported to them at a cost varying from $3 50 to $8 per ton, and *there* converted into bar iron, without refining. In this process there was a great waste, both of iron and stock, but when worked with skill and heavy hammers, the article produced was of very superiour quality, and commanded the highest prices; for in the use of charcoal, we have the unalloyed carbon. This principle is presented to the metal, free from all combination of clay, lime, sand, and sulphur. We shall therefore assume the pig metal as costing to the forges $34 50, and proceed to ascertain the cost of conversion into bar iron:

Materials.	Quantities.	Cost.
Pig Metal	30 cwt at $34 50	$51 75
Charcoal	375 bs. at 3 cents	11 25
Labour		13 25
Incidental expenses		2 50
Interest on capital—say $15,000, and producing 200 tons of bar		4 50
		$83 25

It will be perceived, that the great expense of making iron at that time, arose not only from the expense of cutting, charring and hauling wood, and transporting the same to the furnace, but afterwards the crude iron to the forge, and from the forge to the rolling mill, for the purpose of manufacturing into merchant bar, and then again to the slitting and nailing factory; and all these establishments were many miles distant from each other; and after this handling and transportation, carried at an enormous cost, in many cases, to the Atlantic market.

The cost of transportation to the Atlantic market of this malleable iron, nails, &c., by land and water, averaged at least ten dollars per ton, and it commanded in that market about $110 per ton. There was not much economy practised in these different processes, except in some few establishments. The charcoal was universally produced by the system of open pits in the woods and mountains, and when the wind was high and the nights stormy, which is frequent in our climate, much of the wood was reduced to ashes, under the best colliers and workmen, and it was seldom that more than 25 bushels per cord were produced.

The ores also were mined without any mining knowledge, and thrown into the furnaces without any science. No analysis whatever was made of the different materials—ore was ore, and limestone was limestone, and considered alike, good and bad, and worked by the same process, and one half of the iron masters were entirely ignorant of their qualities. Unfortunately, there has ever been, as Mushat says, "a constant conflict between the practical worker and the chemist"—the former despising the science of the latter, and the latter the practical knowledge of the former. The artisan and the man of science should mutually inform each other; principles will then, and not until then, acquire consistency and correctness, and their value will be established on the surest foundation.

The Blast Blooming Process.

This process consists in removing the oxygen from the richer or metallic ores, and in giving us, by the first process, malleable iron. Our best magnetic, or primitive ores, contain the metal combined only with oxygen, and are per and proto-oxides of iron; if that oxygen is separated, malleable iron will be the result, in a pure and ductile state. This is effected through the superiour affinity of oxygen for carbon in preference to iron. It is more than probable that this was the first process or mode known to man; it was made at first in a kind of *hearth*, similar to the Catalan forge. This method, improved upon, was introduced at a very early day into New Jersey and New York, and the primitive ores of those States worked very extensively and profitably. It was, however, confined to the immediate neighbourhood of these ores, and could only then be profitable where wood was very cheap. Each forge consisted of a hammer and two fires, and each fire produced about thirty-five tons per annum—working during the day. The cost of manufacture was as follows:

Materials.	Quantities.	Cost.
Charcoal	600 bs. at 5 cents	$30 00
Ore	3 tons at $4 per ton	12 00
Charcoal for bar iron	200 bs. at 5 cts	10 00
Wages		16 50
Transportation to New York market		3 75
		$72 25

without any charge for capital or incidentals.

The hot blast, since its introduction into these bloomeries, has reduced the quantity of fuel one half.

From 1810 to 1812, the capital and enterprise of the country was too lucratively employed in commerce to be much attracted to this business, and until the double war duties of 1812, and the necessities of the country for this indispensable article, advanced prices to the most enormous rates, we had not much increase of the make; but this necessity brought into existence large and extensive establishments that enriched thousands at the expense of the government, but unfortunately taught the nation no wisdom. For no sooner was that war ended and peace and tranquillity restored, than this trade was again the victim of the free trade doctrines and policy—and that at a *time*, when the trade required more than at any time previously, a protection against the superiour capital and cheapness of the labour of foreign countries, which now being released from their wars, would of necessity be devoted to trade. The ports were, however, again opened, and the duties on hammered iron reduced, by the bill of 1816, to nine dollars per ton; this ruined most of the manufacturers of iron, and they were compelled to abandon their works.

It was on this memorable occasion, and with our dear-bought experience of the past, fresh upon his mind, that our distinguished statesman, John C. Calhoun, declared in his speech of April, 1816—"That no country ought to be dependent on another for its means of defence; at least on musket and bayonet; our cannon and ball ought to be of domestic manufacture. . . . . When our manufactures are grown to a certain perfection, which they soon will, *under the fostering care of government*, we will no longer experience these evils. The farmer will find a ready market for his surplus produce, and what is almost of equal consequence, a certain and cheap supply for all his wants. His prosperity will diffuse itself to every class in the community, and instead of that languor of industry and individual distress, now incident to a state of war and suspended commerce, the wealth and vigour of the community will not be materially impaired. The arm of government will be nerved.

. . . . *Manufactures produce an interest strictly American, as much as agriculture.* In this they have the decided advantage of *commerce or navigation;* and the country will derive from it much advantage. Again, it is calculated to bind together more closely our wide-spread Republic. It will greatly increase our national dependence and intercourse, and will, as a necessary consequence, excite an increased attention to internal improvement—a subject every way so intimately connected with the ultimate attainment of national strength and the perfection of our political institutions."

Thus deserted again by their government, and denied that protection which could alone sustain them against the vast accumulations and productions of the entire world, it is only strange that the trade was not annihilated—the indomitable and unconquerable spirit of American enterprise subdued, and all confidence in the government lost. But fortunately for the nation, being obliged to resort to England for all our supplies, the drain of the precious metals were such, as soon to involve our currency in confusion, and which obliged us, in 1818, to give further protection to this industry. By the act of April 20, 1818, the duty on hammered iron was raised to $15 per ton—pig iron $10, and rolled iron $30—this partially revived the trade, and many who had stopped resumed their operations.

			Duty.
In 1816,	iron commanded, from	$110 to $120 00	$9 00
1817,	" "	90 to 100 00	9 00
1818, till 1820,	" "	90 to 100 00	15 00

Importations.

1818,	13,931	tons hammered iron.
1819,	16,160	" " "
1820,	19,531	" " "

Actual decline of price, with increased duty, and yet larger importations. But this decline of price was not the only good effect of this protection and duty, for it stimulated at once the skill and industry of our western people, who were induced by this protection to embark their money in the trade. During the years from 1816 to 1818, bar iron sold at Pittsburg and Cincinnati, from $200 to $220 per ton; boiler iron, $350 per ton; sheet iron, $18 per cwt.; hoop iron, $250 per ton; and yet no efforts were made, worthy of notice, to manufacture this article, so indispensable to a new country, until after the bill of 1818.

In 1824, the duty on hammered iron was raised to $18 per ton, and in 1820, to $22 40; pig iron, $12 50, and rolled, $37. This increased duty, like that of 1818, did not advance its prices, so that the consumer of iron, in 1828, under the duty of $22 40, procured his iron for a less price than he did when that duty was $9 per ton, and realized, to the Treasury, the increased duty at the expense of the *foreign* manufacturer.

		Cincinnati.	Hammered Iron. Importations.
Price from 1825 to 1829,	$100 00	$135 00 to $120 00	1828,.. 33,155 tons.
1830,	90 00	110 00 to 105 00	1829,.. 29,202 tons.
1831,	75 00	110	1830,.. 30,973 tons.

And this competition sprung up because our own production could be estimated and arrived at with some accuracy; but that of foreign countries cannot be. It will be recollected that in the close *of* 1843, *and January,* 1844, iron commanded only £5 in England, and is now selling freely at £12, and that her far-sighted iron masters offered at the session of Congress of 1844, to supply us, for years to come, with railway iron at less than £5, and at that price per ton, Sir John Guest contracted with the Russian government, for the iron necessary for the magnificent railway now being constructed from Petersburg to Moscow, of 400 miles; and we were urged by *even the friends of protection*, to become again dependent upon a foreign country for this article, which now forms one of the principal items of consumption, and by means of it to degrade ourselves still further in foreign estimation as an independent country.

It is this fluctuating price of iron in England, from over-production, that requires upon our part, such *heavy duties*, for although iron was at the lowest figure; yet it was not lower than in 1832—*twelve years* before, and this fluctuation takes place without any sensible change in the cost of production. In *July*, 1824, iron commanded in England, £9 15*s.*; September, £10; October 4th, £11; October 23d, £13; February, £15; and *often*, as *recently*, advancing £3 per month. Suppose our country *entirely* dependent for our supplies, and what would be the result, where the speculation of a few capitalists is able to control the market and monopolize all the stocks.

Up to this period (1819)—we may still say, that iron was manufactured from charcoal; but a great advancement had been made in the trade, by reserving the charcoal fot the blast furnace and rolling the iron from the bloom, with bituminous coal, into boiler plate, sheet iron, hoops, &c., &c., &c.—all the variety of the higher descriptions of iron. This delicate process of puddling was not introduced for sometime afterwards, which requires more judgment and experience than any other in the iron trade, and was not so slowly introduced into this country as has been generally supposed. It was an invention, as we have shown, of 1784, by Mr. Cort, of Gosport, and thoroughly and profitably carried out in England at the commencement of the present century.

But we were not prepared for its adoption in this country, for we must recollect that our internal navigation and improvements did not enable us to reach any of the mineral districts until after that period. That although our mineral wealth exceeded that of any other part of the globe, yet it was entirely undeveloped—all those rich deposites, unlike those of England, *lay far* in the interiour; and if this process had been thoroughly understood, iron could not have been manufactured upon the Atlantic border at lower rates than that furnished by charcoal; all the great internal improvements were *commenced* after this. The Lehigh navigation, which was the first that penetrated the coal region, was not completed till 1820, in which year the company mined and delivered 365 tons in Philadelphia, and sold it for $8 40 per ton, and this price continued till 1824, when it was reduced to $7 33 per ton. The commencement of the trade upon the Schuylkill Canal may be dated in 1825. From 1816 to 1823, inclusive, (during which time the duty on coal was $1 80 per ton,) the average price of foreign coal on the Atlantic border, was about $11 per ton. In 1821 the average price of coal was $14 per ton; from 1824 to 1834, the average price was $10 per ton. It was therefore necessary, before we could adopt many of the English improvements, with advantage, that our canals and railways should be constructed, to extend to the manufacturer the facilities of transportation; and how rapid has been our progress since that day! no country on earth can produce any thing in physical efforts, within the same time, to compare with it.

This process of puddling, after its introduction, gave a great impetus to the business, and Pittsburg, which was located in the midst of the best bituminous coal, soon rendered the western world independent of foreign markets, and became, from the skill of her manufacturers, the industry and enterprise of her inhabitants, the Birmingham of the United States, and in a few years reduced the price of iron *one* half, to the consumer of that region, notwithstanding they had to transport their *blooms* for the manufacture of iron, from the centre of Pennsylvania across the lofty Alleghanies. Under this protection (bill of 1828) the trade flourished rapidly, and increased at a rate of nearly twenty-five per cent. annually.

The make of	1828	was	130,861 tons.
"	1829	"	142,870 "
"	1830	"	191,536 "

And in 1832, we were manufacturing about 200,000 tons of pig metal, and ranked *second* in this manufacture upon the list of nations—having outstripped Sweden and Russia, France and Austria, and Prussia.

In 1830, the make of	France was	150,000	tons.
" "	Russia, "	167,500	Villes.
" "	Sweden, "	150,000	Karsten.
" "	Austria, "	100,000	"
" "	Prussia, "	80,000	Virlet.

Indeed, the progress of the country from 1824 to 1833, was unrivalled, and gave us every assurance that this increase would be progressive, until not only the domestic market should be supplied, but a surplus remain for exportation ; but all this was to avail us nothing, and to be again invaded by the ruthless hand of the free trade destructionist—notwithstanding the experience of the country, and the brilliant results under this tariff, yet the extreme dissatisfaction of one single State, by threats of disunion and nullification, forced the enactment by Congress of the Compromise Act of 1832 ; and every thing was sacrificed to the speculative theories of the day, and this was done at a *time*, when the extension of this trade and the improvement, economy and skill introduced into the business, had reduced the price of iron to a lower point than it had ever reached in the history of the country—$75 per ton for bar iron of the best quality.

By this act the duty on English bars was gradually reduced from $30 per ton in 1832, to—

	Bar iron.	Pig metal.	Railway iron.
In 1834	$27 00	$9 50	Free of duty.
" 1836	24 00	9 00	
" 1838	21 00	8 50	
" 1840	18 00	8 00	
And in July and August, 1842	7 50	4 50	

And as this was only the beginning of the experimental system, which was carried out in such rapid and fearful succession, let us examine how far it realized for the consumers, *low prices*, to say nothing of its effect upon the working classes of society—the great mass of the community, and whose interests form the basis of all our prosperity.

		£	s.	d.		£	s.	d.
In 1832	bar iron sold in England for…	5	0	0	railway iron,	6	15	0
1833	" …………………	6	0	0	"	7	10	0
1834	" …………………	6	10	0	"	8	0	0
1835	" …………………	5	15	0	"	8	0	5
1836	" …………………	10	0	0	"	11	15	0
1837	" …………………	8	15	0	"	10	0	0
1838	" …………………	8	15	0	"	10	10	0
1839	" …………………	9	0	0	"	10	10	0
1840	" …………………	8	0	0	"	9	12	6
1841	" …………………	6	10	0	"	8	0	0

Thus teaching the country again, that the only effect of low duties was, to prostrate our trade, enrich the foreign manufacturer and labourer, and bring their establishments into the highest perfection and improvement, and without cheapening the *cost* to us. Could any other result be expected? Give the English iron masters the monopoly, and is it not human nature, that they should endeavour, by combination, to reap the harvest while the sun shines? This combination and control over prices with them, is readily effected, for they have their stated quarterly meetings of the trade, in which not only the prices of iron are regulated, but the wages of the men, and the reduction of the make of their furnaces, and so absolute is this control, that every manufacturer must be governed by it. Can any intelligent mind believe that the great advance of the price of railway iron from 1830, of £6 15*s*., in the infancy of the trade, to £12 10*s*., in 1836, was any thing else than the result of this control over prices? because during that period, the iron business had greatly extended, and an immense amount of capital been embarked in it.

It will thus be perceived, that at no period in the history of *this country*, did this trade receive the cordial, efficient, and uniform aid of the government; but it has been the constant sport of legislative change and experiment, and at each successive change, they are asked, why their furnaces, rolling mills and foundries, do not immediately meet the wants and demands of the country, as if they could divert their industry, and adapt themselves, without injury, to the vacillating policy of the government.

From 1832 to 1839, there was no extension of the iron business by new investments, but the introduction of the hot blast, and other improvements, produced the most marvellous results, not only in the increase of the make of iron, but the economy of production, by which many establishments were rescued from ruin. The puddling process was generally adopted and worked with great practical skill, and this accurate knowledge, the result of time and experience only, soon enabled our eastern establishments to work the American pig metal into nail plates, that have almost excluded and shut out the Swedish iron; the consumption of which, in this branch of manufacture, was so great, from its perfection, and the immense consumption of these articles in all the mechanical arts and trades, by reason of the great reduction of price—and all the result of American genius and invention, stimulated into action by a high duty. There is now *fifty thousand tons of nails* manufactured in this country, at prices which bid defiance to any foreign country. The rolling mills were also greatly improved in their machinery, and adapted to the finishing of the higher descriptions or qualities, and smaller sizes of iron.

In 1806, the difference in England, between common sizes and half inch, was nearly £7 per ton, and it required twenty-five years to bring the difference to £1, and it was this same advancement at a slower rate that our mills were making by the perfection of their machinery. The blast furnace, independent of the hot blast, was much improved, and its economy greatly extended, by the introduction of cast iron blowing cylinders, water *tuyeres*, kilns for charring the wood, &c.

The make of 1832 of 225,000 tons, must have been increased by this economy and the improvements, at least one-third; and we may, therefore, safely put down our entire production at 300,000 tons in 1839. Up to this period, the iron ores or stones were smelted in the blast furnace exclusively with charcoal, and it is highly curious and interesting to mark the course of this great branch of industry in *this respect*, both in England and this country. For it would appear that energy and skill were given to us, just in proportion to our necessities and wants. That whilst the forest was to be cut away, or lands to be cleared for agricultural purposes, we possessed neither "the minds to devise, or hands to execute the improvements of other nations around us," and thus it is, at last, necessity that impels a nation to the highest and most vigorous efforts. Although Dudley succeeded in 1619 in making coke pig iron, yet the enterprise and skill of England slept upon the process for 121 years, and it was not until 1788, that it was revived, by the rapid decline of the annual growth of timber. And although this process was perfected half a century ago and its manifold advantages taught, yet every effort that was made in our country to manufacture iron from mineral coal, as the combustible in the blast furnace, proved abortive *until this year*, (1839;) and from this time forwards, we have seen our mineral coal furnaces increasing as rapidly, as they did in England, when pit coal became an object of universal estimation.

The entire success of Mr. George Crane, of the Gniscedlyn iron works, in May of this year, 1839, with anthracite coal, as the combustible in the blast furnace, with the use or the application of the hot blast, brought into the business many enterprising parties and gave birth to some splendid establishments, both in the anthracite and bituminous regions. It is strange that although none of the skill, experience or science derived from Mr. Crane's experiments were taken advantage of by Mr. William Lyman, in his prize blast of ninety days (December, 1839) continuance, at Pottsville, yet his success was complete and perfect, and it is almost incredible, when we recur to the many attempts that were made in this country, France, and England, to use this fuel. In France the experiments were under the most favourable circumstances, that money and science could furnish; but they were entire failures and incurred a heavy loss to the enterprising proprietors—the commencement, progress and result of which are worthy of attention, and are to be found in the Annales des Mines, vol. III. and IV.—3d Series, p. 71. Yet, at Pottsville, with a very inferiour furnace and a weak and inefficient blast, a good result was obtained—enough to inspire confidence in the business in the minds of those enterprising parties to whom we have referred.

The average run of this furnace is said to have been as follows, viz:—

Coal,.......1,000 lbs.
Ore,.........1,750 lbs.
Limestone,.. 800 lbs..
Charge—and from 18 to 20 charges per 24 hours—yielding 34 tons of iron, per week.

It is true that we have relied much in this trade upon England, for the experimental part; but after that is accomplished, we usually take advantage of it, with an avidity unsurpassed by any other nation in the world, and this is because we have no old habits or prejudices to contend with—our shrewdness in this respect is national and it is wise—for all these bold enterprises, although they become the grave of large amounts of capital, yet in the end they lead to eventual good, and in no business to so great an extent as the iron. For we believe, from the earliest day to this, the great public benefactors of this business have not been enabled to turn to their own advantage their schemes and improvements: ruin has generally overtaken them, and then the improvement has become highly profitable in the hands of others. Dudley's furnaces were burnt down—Cort's splendid discoveries were his ruin, and yet large fortunes were derived from them. Mushat, who gave such value to the estates in Scotland, by the discovery of the black band, and "daring (to use his own language) to apply it to the purpose of smelting, about forty-one years ago, amidst the sneers and pity of the iron veterans of those days at such folly," derived no benefit from it, not even the crown of gold (which is still in abeyance) which he was pronounced worthy of, by a distinguished iron master—although it added so much to the Scotch estates and the general wealth of the kingdom. The *liberty*, or privilege of working 300 acres of the Aerdie estate is leased, on a long term of years, for £12,000 sterling.

It is natural to suppose that complete success can only be obtained through repeated failures—"although these very failures themselves pave the way, slowly it may be, but surely also—to ultimate success and certainty."

The anthracite furnaces referred to are as follows: the number in blast, out of blast, erecting and about to be erected, and *product*.

Names of works.	By whom built.	In blast.	Out blast.	Erecting.	Production.
Morton Iron Works, Danville, Pa,	Biddle, Chambers & Co.,	3	..	1	10,000 tons.
Columbia Furnace, Danville, Pa.,	G. Patterson,	1	..	..	2,000 tons.
Roaring Creek, Columbia County, Pa.,	Thomas Dunlap,	1	..	..	2,000 tons.
Moresburgh, Columbia County, Pa.,	Thomas Dunlap,	1	..	..	2,000 tons.
Shamokin Furnace,	Shamokin Iron Co.,		1	..	4,000 tons.
Lakawana Furnace, Luzerne County, Pa.	Messrs. Scranton,	1	..	..	2,000 tons.
Pottsville Furnace, Pottsville, Pa.,	Burd, Patterson, and others,	1	..	..	2,000 tons.
Schuylkill Valley Furnace, near Pottsville, Pa.,	Dr. Geissenhainer,	1	..	..	2,000 tons.
Phœnixville Furnace, Chester County,	Reeves & Whitaker,	1	..	2	2,000 tons.
Spring Mill Furnace,	Kunze & Craig,		1	..	
Spring Hill Furnace,	Patterson & Tams,		..	2	
Mauch Chunk, Pa,	J. Genteau & Co,		1	..	
Reading, Pa.,	Geo. N. Eckert—Blow in, in June,	..	..	1	
Harrisburgh, Pa.,	D. R. Porter, & Burke,		..	1	
Bloomsburgh, Pa.,	Rodman & Co.—1 Furnace almost ready to blow in,	..	..	2	
St. Clair Furnace, near Pottsville, Pa.,	Burd Patterson,	..	..	1	
		10	3	10	28,000 tons.

Names of works.	By whom built.	In blast.	Out blast.	Erecting.	Production.
Crane Iron Works, near Allentown, Pa.,	Crane Iron Co,	2	..	..	8,000 tons.
Glandon Iron Works, Easton, Pa.,	Jackson,	2	..	..	8,000 tons.
					44,000 tons.
In Jersey.					
Stanhope Furnace, Morris County, N. J.,		3	..	..	9,000 tons.
Boonton Furnace,	New Jersey Iron Co.,		1	..	
		17	4	10	53,000 tons.
Holmes & Myers, Columbia, Pa.,	Holmes & Myers,	1	..	..	2,000 tons.
Marietta, Pa.	Porter & Stewart,	1	..	..	2,000 tons.
		19	4	10	57,000 tons.

Some of the rolling mills using exclusively anthracite coal, in all the processes of refining, puddling, heating and reheating, in active operation.

Names of works.	By whom built.	Product.
Wilkesbarre Mill, Pa.,	Biddle, Chambers & Co., (new erection,)	6,000 tons bar iron and nails.
Lackawana Mills, near Wilkesbarre, Pa.,	Messrs. Scranton, do.	1,500 do do.
Mortom Iron Co., Danville, Pa.,	Leavitt, Murdock, &c., to be in operation in August,	10,000 tons—railway.
Boonton, N. J.,	New Jersey Iron Co.,	4,000 tons.
Phœnixville Mill, Pa.,	Reeves & Whitaker.---At this establishment may be seen the process from the smelting of ore in the blast furnace to the finished nail, 124,800 kegs made per annum of nails.	6,500 tons.
Cumberland Mill, New Jersey,	Do.	
Morristown, Pa.,	Do.	
Reading Mill,	Kline & Whitaker,	3,000 tons bar and nails,
Chester County Iron Works,	Jaudons & Mason,	1,500 tons nails.
Philadelphia,	J. Hunt,	1,500 tons bars.
Manayunk,	Buckley,	500 tons boiler plate.

Bituminous Coal.

Names of works.	By whom built.	Furnaces in blast.	Out blast.	Erecting.
Great Western Iron Works, Pa.,	Great Western Iron Co.,	1	..	1
Karthan's, Clearfield Co., Pa.,	Boyd and others,		1	..
Lonakoning, on George Creek, Md.,	Alexander & Co.,	1	..	..
Jenning's Run, Mount Savage Iron Works,	Mount Savage Co.,	1	1	1
Western Pennsylvania,		.	..	10
		3	2	12

Rolling Mills.

Names of works.	By whom built.	Product per annum.
Mount Savage Iron Works,	Mount Savage Iron Co.,	5,000 tons of railway iron.
Great Western,	Great Western Iron Co.,	5,000 tons—half rail road.

These nineteen anthracite furnaces will produce, at least, fifty thousand tons pig metal this year; one half of which will be manufactured into bar and railway iron. The vast rolling mill being erected at Danville, by the Montour Iron Company, and which will be in full operation by the 1st of August next, will have the capacity to manufacture at least ten thousand tons of malleable iron, and it is believed, will be entirely and exclusively devoted to the manufacture of railway iron, since it is all important to meet the wants of the country. The mill at Wilkesbarre was erected expressly for this purpose, and yet nothing has been done there, because of the profits upon the common descriptions of bar iron. They ought to perceive, that if the reasonable demands of the country for this article are not supplied, the entire duty may be repealed.

The three great establishments of those enumerated, are the Montour, the Mount Savage, and the Great Western Iron Works. These establishments have each cost from $250,000 to $600,000, and are built upon a scale that will somewhat compare with the best establishments in England. They have been entirely successful in demonstrating, that both the anthracite and bituminous coals of our country can be used *profitably* as the fuel of our blast furnaces, in the smelting of the ores and the production of the pig metal, and for the conversion of the same into malleable iron, by refining, puddling, and reheating; and in all of which processes, from the ore to the finished bar of malleable iron, the results have been most complete and perfect.

These splendid results unlocked treasures, and have conferred vast benefits upon the country, and are destined still to diffuse extensive blessings to unborn millions; for, as long as the iron ores and the coal of the anthracite and bituminous regions were incapable of fusion, the ores were entirely useless, and the coal nearly unavailable for manufactures, and the great wealth of the country locked up. It was the railway impetus and demand, which appeared unlimited in 1839, that brought these vast establishments into existence, and the confident belief that the government, upon the expiration of the compromise bill, would sustain and foster this industry, by the heaviest duties; for so great had been the drain of the precious metals for this article alone, that every candid mind had been forced to the irresistible conclusion, that if the iron could not be manufactured at home, it would be better to dispense with our railways than to exhaust all our resources to obtain them. So long as the exchange of State bonds and other such securities would do, we flourished; but the day of reckoning came, and the reaction was felt from Maine to Georgia. Sound principles, however, triumphed, and the existing tariff bill was secured—not early enough, however, to save from destruction and ruin many of those who had advanced so boldly and nobly into this manufacture, and to whom the country is so largely indebted.

Prices of Bar Iron in England.

	£	s.		£	s.
In 1838, - - - - -	8	15	In 1841, - - - - -	6	10
1839, - - - - -	9	0	1842–3, - - - -	5	0
1840, - - - - -	8	0			

The importation of iron under this reduction, brought ruin and dismay upon all engaged in the trade here. "The storm (to use the language of Gov. Davis) was general, and in its fury swept over the country, once and again, uprooting the stateliest and firmest trees, and leaving in its track a dreary and desolate waste. Its marks are too deeply engraven, too distinct, too well defined, to leave anything uncertain—anything unequivocal. It fell upon us with such a with ering blight as to leave no doubt, when, where, and how it began;" and under its influence these vast furnaces, rolling mills, and hammers, were all silent as death, in 1841, '42. How instructive the lesson taught us by this condition of the trade! Those who had pioneered in this business, and incurred the risks and heavy losses that always attend the introduction of new improvements, were obliged, by the reduction of duty, to compete with the foreign iron in market, at about $55 per ton for bar iron, and $18 per ton for pig metal; and this reduction was enjoyed by the consumer *only long enough* to place these establishments in the hands of others, to realize from them large fortunes—from $35 to $40 per ton for pig metal. Whereas, if the system had been uniform and stable, the progress of this business from 1840 would have been such as to render our country, at this time, entirely independent of the fluctuations of a foreign market, and at very reduced rates upon the prices of 1840. But this experience has not been too dearly bought, if it for ever puts at rest this vexed question.

The tariff of 1842 has again revived the business and industry of the country—restored confidence—replenished the national treasury—built up commerce—given employment to all descriptions of labour, and infused life and animation into every department of industry. Our furnaces, our forges, our rolling mills, our cutlery establishments, and our foundries, that were all shut up, are now in operation, and full of life and activity, and labour is receiving the highest rewards, and the avails of that labour is expended among our own people, instead of sustaining foreign capitalists and artisans. But in the midst of this prosperity, have we any assurance of its stability? Can the capitalist invest his money with safety in the production of this article of universal demand? or is he again to be exposed to the over-production of England, brought about by her pauper labour and overgrown establishments? If so, the result will be the immediate prostration of all our iron establishments. It is idle to suppose that we can, without due protection, contend against the superiour capital and cheapness of labour of foreign countries, nor should we desire it. With them labour has been reduced, as we have shown, to *pauperism*, and nothing can exceed the destitution and squalidness of that labour—starved, ragged, and dirty, beyond all description—men and women, boys and girls, promiscuously employed in the severest kinds of labour. An eloquent writer observes: "I need not speak of the excellence of English machinery or work. It is well known, that the English manufacturers have reduced almost every kind of mechanism to what seems to be absolute perfection. But one cares little for the beauty of machinery or its perfection, when he sees the human frame in ruins—that whilst the work is made perfect, the workman is destroyed."

And is it against establishments thus sustained and conducted, and with labour thus remunerated, that our manufacturers are to contend? Will the free-born spirit of an American brook this condition of society, or be willing to be degraded almost to the condition of brutes, and to occupy the same apartments? Is it the only object of a country to buy cheap, or is not the policy and aim of *all free nations* to elevate man—to give dignity to his character, and improve his moral and social condition—to enlighten his mind, and make knowledge as free as the air he breathes? These high qualities are necessary to fit him for such a government as ours, and to make him free and independent; and what trade has a greater tendency to do this than the iron trade, and give you athletic men of great bodily vigour, whose minds as well as bodies are constantly occupied? It has certainly no tendency to deteriorate the physical constitution, and produce "a feeble and degenerate race of men, without spirit or ability to defend their rights."

The physical miseries of the English operatives are greater by far than were the West India slaves, before their emancipation—"neither instructed in science, religion, or the common business or economy of life."

To return to our statistics: it may now be said, without any fear, that our manufacture of iron from mineral coal is fully established, and will meet, ere long, the entire wants of the country for that description of metal. There will be manufactured this year, from anthracite coal, as we have shown, at least fifty thousand tons of pig metal; one half of which will be converted into all the various descriptions of bar iron by the same fuel; to which, if we add the production from bituminous coal, say 25,000 tons of pig metal, one half of which being converted into bar iron, we have the grand total of 75,000 tons of pig metal for this year (to say nothing of the vast increase of the *make* of the charcoal furnaces) from mineral coal, or 37,500 tons of pig metal and 31,875 tons of bar iron. The present high prices and profits have given a great impetus to the trade, and new furnaces and rolling mills are being erected in every direction, and those that were rendered inoperative and unproductive, from the low prices of iron in 1843-'44, are again at work, and we shall be mistaken, if the year 1846 does not find us prepared to meet all the wants of the country for pig and bar iron, and most of the railway, and thus remove our deplorable dependency upon a foreign country for this indispensable article. Our average importations for the last five years, (including the period of low duties,) has been only 84,000 tons of all descriptions of iron, and the annual average importation of pig metal, from 1836-'37 to 1843-'44, has only been 13,478 tons. This metal (by anthracite) is now manufactured for less than $15 per ton for *pig* metal, and worked into common bar iron for less than $37 per ton. The materials used in each process are as follows—based upon a furnace making 75 tons per week, (average)—

Materials.			Cost.
3 tons of anthracite coal, steam power, &c., included,	$2 00 per ton		$6 00
2½ tons of ore,	1 50 "		3 75
1 ton limestone	75 "		75
Labour			1 75
Incidentals, without charge for capital			2 00
Per ton			$14 25
Refining.			
1½ cwt. waste, 7½ per cent.		1 05	
6½ cwt. coal, $2 00 per ton		65	
Labour 75 cents, 30 cents		1 05	
Repairs, ore and blast		50	3 25
Puddling, Rolling, &c.			
21 cwt. of refined pig, at	$17 25	18 11	
18 cwt. coal,	2 00	1 80	
Stock 25, puddling	5 50	5 75	
Shingling $1, rolling	90	1 90	
Weighing 12, incidental	4 00	4 12	31 68
Add, rolling, piling and reheating		1 50	
If steam power, 10 cwt. coal for engine			$33 18

Common bar iron at the works.

This furnace, averaging seventy-five tons per week, will produce 3,900 tons of pig metal, with a consumption of 60 cwt. of coal per ton of iron; say 11,700 tons of coal, 9,750 tons of ore and 3,900 tons of limestone—then refining, puddling and rolling—will produce 3,412 1-2 tons of common bar, and 33 cwt. of coal per ton—5,886 1-2 tons of coal—making the entire consumption of fuel in this one establishment, 17,586 tons of coal, 9,750 tons of ore, and 3,900 tons of limestone; and when we contemplate the consumption of these immense masses of native material, and their utter worthlessness for any other purpose, who would cripple this manufacture? for of what use would be the coal, the limestone, the iron ore, the sand and fire clay, employed in making iron, if not thus applied? Extend this estimate to nineteen furnaces, (the extent of the hitherto unrivalled establishment of Sir John Guest, Lewis & Co., at Dowlais) and the conversion of it into malleable iron, and recollect that the voracious appetite of these furnaces and rolling mills are never satisfied, and you have the enormous consumption of upwards of three hundred and fifty thousand tons of coal by this one establishment, one hundred and eighty-five thousand two hundred and fifty tons of ore, and seventy-four thousand one hundred tons of limestone, giving direct employment to at least six thousand individuals, besides their wives and families, to say nothing of those that are indirectly employed.

With regard to railway iron, it furnishes a subject of deep consideration for both the statesman and the manufacturer. The idea of being again dependent upon a foreign country for this article is totally inadmissible; and yet it is manifest that the entire quantity needed cannot be manufactured within any reasonable time. Having given much reflection to this subject, I should propose to the trade their unanimous advocacy of the *Bill* reported to the Senate of the United States, at the last session of Congress, remitting all duties to the companies incorporated before 1842, for the term of three years, and two years thereafter to lay down—the stock of which was subscribed, and the road located and surveyed, accompanied with the privilege of replacing all the flat bars with heavy rails. This would quiet all agitation upon this subject, and would not interfere with the principles of the Bill of 1842, for that Bill gave the companies thus incorporated, the right and privilege, for a certain period after its passage, of importing their iron *free of duty;* but as they have truly said, "their misfortunes, which they shared in common with the rest of the community, prevented them from taking advantage of this provision; at that period almost every business facility was at an end, and every great unfinished enterprise wanting capital was in danger of ruin." A sense of justice and right requires that they should be relieved; for these companies invested their money under that policy, and there is scarcely an instance in which they have made a dividend. From the magnitude of the consumption of iron in railways, it must be manifest to every intelligent iron master, *that the roads incorporated since* 1842 will give a demand for the most extensive and rapid production of the country. These views are based, too, upon the impression that the large mineral coal establishments will turn their attention mainly to this manufacture, because the *machinery can be introduced at much less cost,* than that for the manufacture of the smaller sizes of iron, and because their iron will not answer for the finer purposes of manufacture, without much labour; and as we have now shown, (notwithstanding the predictions to the contrary,) that we have as much skill and invention as is necessary for the purpose, the product must be great. But how vast is the field which these railways open for the enterprise and capital of the country, and how much will they contribute to our power and productive industry? It is admitting all that can be asked by the trade, that the existing works can supply the roads incorporated under *our present policy*—and this, we think, that they can do. It is only works of undoubted public utility and advantage that will be now constructed; but one single magnificent project of this kind requires a large quantity of iron. Take, for instance, the New York and Albany Rail Road; every mile of this road will require 150 tons of iron rail, and, consequently, use up 8,000 tons, about the production of the country for this year; next year, 1846, we estimate the production at 20,000 tons on the Atlantic border, and annually, thereafter, to the entire demand of the country—and which demand will fall greatly short of the wild estimates that are daily made. Up to 1840, there was projected in this country, 9,378 miles of railway. From 1826 to 1835, there were open and in use, 984 miles, which, at 50 tons to the mile, is 49,200 tons. From 1835 to 1845, there were open and in use, 3,420 miles, which, at 50 tons to the mile, is 188,400 tons.

From this statement it appears, that we required from 1826 to 1835, but an *annual* average of 5,466 tons, and from 1835 to 1845, only 18,840 tons; and as no lover of his country would like to see a greater railway mania than prevailed during that period, when the accomplishment of one great work was only an incentive to others of more magnificence and splendour, and when State bonds were almost as current as specie, it cannot be supposed that we shall want more than the average of the entire period—say 12,150 tons per annum, which will be more than met by the establishments of the next year. There will then remain of our unfinished projects, 4,626 miles—of which there may be completed within the next year, one-third—not more, because many of them were entirely speculative, no regard being had to the productiveness of the work; and for which we shall want immediately, if the funds can be procured, 150,000 tons of railway iron; and it is this iron that might be imported, in order to render these works productive, and thus promote, by the earliest day possible, all the facilities of transportation and prosperity which they may confer. In many instances, the roads have been located and graded, and all the damages incurred by cutting up farms, &c., and in some few cases large sums are held in our treasury for duties that might relieve them from debt. The flat bar roads will be supplied very gradually. The present mania does not extend to old works, but to new projects—plans, as we have said, of undoubted utility and advantage, and which will keep our establishments actively employed.

We think that the mineral coal establishments had *far better* give up all discriminating duties, than release the duties entirely upon railway iron; for this is the very description of iron which they can make *profitably*, and when they have once directed their attention to it, very *cheaply*. It is all important that their skill should be devoted exclusively to this manufacture, to bring it *soon* to the highest perfection; and when this is done, we shall see the triumph of American ingenuity and skill. It will be as marked as that in the cut nail manufacture. It will not take us twenty years (like England) to make an annual product of 120,000 tons, under such prices as sustained their trade.

The canals and railways that have been built, and that now penetrate our coal and iron regions, furnish all the facilities for this manufacture that can be obtained, by any extension of them. It is true that the field of competition might be enlarged, and rich portions of the Union still developed; but we have now "the furnace, the ore, the fuel, the brick, the fire clay, the forge, the rolling mill," in various districts, as well located as they can be; and the facilities of transportation, from many, as cheap as any part of the world. These great public works, as yet, have only developed the country, and in most cases realized no interest upon the investment, and were much too gigantic for the requirements of trade; but the day will soon come, if we are *true to ourselves*, when they will be profitable. Let our city capitalists invest their money to build up these iron works, and enjoy their rich rewards, instead of employing their time in getting up stock-jobbing railways, and then crying aloud for the repeal of the duties upon railway iron.

From the best estimates which we can make of the aggregate product of the United States, and we base it upon the official returns made to the Secretary of the Treasury of the United States, and our knowledge of those returns—as we have before said, we think they can be relied upon as accurate in relation to the number of the establishments, machinery, &c., although very imperfect as to the amount of capital invested, and the product—there is no object gained in the concealment of the former, but something in the latter. By the census of 1840, the number of furnaces in Pennsylvania is 213, and from returns collected with great labour, by a committee in Philadelphia, in 1841, we were satisfied that more than that number existed at that period, although the returns exhibited only 210 furnaces in 1841—as there were many from whom we could not procure any returns, and who were much more disposed to suppress information upon this subject than the marshals. It is strange that those who have so deep an interest, and are constantly calling upon the government for protection and aid, should do so little to furnish accurate information, by which they might enlighten Congress upon a subject of such vital interest. It can scarcely be realized, that a government of twenty millions of people should exist, without having organized a statistical bureau, so as to collect facts and this description of information, upon which legislation ought to be based. Theories would then give place to experience and the demonstration of active operations. Place, as has been strongly urged at all times by the advocates of the protective policy, the *materials* for *sound thought* and correct action within the grasp of every American citizen, and *unsound* legislation would soon cease. Such information, if once spread before the nation, would, like the rays of the sun, penetrate every hill and valley of the country, and be properly weighed and estimated. Much, however, of the evil incident to this want of information, might be remedied by the trade, if the iron masters would give more publicity to the working of their furnaces and mills. It would be more to their own interest, as it would prevent injudicious investments, and show that not only much depends upon the character of the ores and their practical working in the furnace, but also that great skill and discretion and industry are necessary to manage the business with success. But information cannot be extracted from them. Societies have been formed over and over again for that purpose, and every effort made to stimulate their ambition, but without success.

By the census, then, of 1840, we had 804 blast furnaces, and 795 rolling mills, forges, slitting mills, &c. These furnaces would produce, at the lowest estimate, an average annual product of 550 tons to the furnace, which would give us 442,000 tons per annum, as the entire product of the United States at that time. Since then, there has been built at least thirty furnaces of the best class, most of them for anthracite and bituminous coal, and the product of which must be at least 60,000 tons, making in all, the enormous product of 480,000 tons; one half of which, I presume, is converted into bar, hoop, sheet, boiler iron, nails, &c., and the remainder into castings, machinery, stove plates, hollow ware, &c.—although the English calculation is, that only three-tenths of their product is foundry metal. Estimated as follows :

291,600	tons wrought iron, at	$80	$23,328,000
121,500	" casting	75	9,112,500
30,000	" blooming iron	50	1,500,000
443,100			$33,940,500
24,300	increase to this time.		
467,000			

and which would be as follows :

1840	804 blast furnaces, producing 550 tons to the furnace per annum,	442,000 tons.
1845	30 furnaces, mineral and charcoal, producing 2000 tons per annum,	60,000 "
		502,000 tons.
1840	795 rolling, and slitting, and forges, bloomeries, &c.	213,350 tons of bar, hoop, boiler, &c.
1845	5 rolling mills	
	20 bloomeries	
	820	

But to throw all the light possible upon this subject, we submit also, the estimate of a late writer, (see Merchants' Magazine, March 1845,) who remarks that he has taken much pains to arrive at correct conclusions :—

Whole product of the United States in 1845.

540 blast furnaces, yielding 456,000 tons pig iron—average of 900 tons to the furnace per annum,	486,000 tons.
950 bloomeries, forges, rolling and slitting mills, and yielding,	291,600 tons of bar, hoops, &c.
Blooms,	30,000 tons.
Castings, machinery, stove plates, &c.,	121,500 tons.

which at their present market value, he estimates, would stand thus—

291,600 tons of wrought iron, at $80 per ton,	$23,328,000
121,500 tons of castings, at $75 per ton,	9,112,500
30,000 tons of bloomery iron, at $50,	1,500,000
	$33,940,500

To which must be added to the quantity imported for the last year—

46,000 tons bar iron, rolled, at $60 per ton,	$2,760,000
17,500 tons hammered, at $80,	1,400,000
16,050 tons pig iron, converted into castings, at $75 per ton,	1,950,750
5,570 tons of scrap iron, at $35 per ton,	201,950
4,157 tons of sheet, hoops, &c., at $130 per ton,	540,410
2,800 tons of steel, at $335 per ton,	938,000
Consumption,	$41,734,610

Every ten tons of pig metal, according to our views and calculations, requires one labourer and four dependants, which gives 251,000 people, immediately dependent upon this interest. In France, the estimate is less than eight tons to the hand, and in England, more than 35 tons; France, 42,418 individuals; England, 47,830 do. In this country, the agricultural product consumed is very large, say one-fourth of the value of each ton of iron, or castings. We think that this vastly increased production ought to satisfy the most timorous mind, that no limit can be placed to our production, except the want of consumption and demand; provided the present tariff is not materially changed.

We are not the advocates of prohibitory duties, although such is the policy of the English or French, when they wish to build up any particular industry. The French duties on iron, at the present time, are as follows:—

Common bar iron,	£8	7*s.*	4*d.*
Higher descriptions,	16	14	9 to 26 15 8
Pig metal,	3	2	6

But we think that a system, when adopted, ought to be stable and fixed; and that after the capital, skill, and time of the manufacturer has been embarked upon the faith of the government, any changes ought to be made with great caution, and a clear case of public expediency made out; if not, who will expend thought, science, labour, and money, in maturing and perfecting any business?

England, we believe, independent of her accumulated capital, the perfection of her machinery, the skill of her workmen, and the cheapness of her labour, has a great superiority of natural advantages. She is a sea-girt island—the gem of the ocean—and her great mineral wealth, both of iron and coal, is upon the ocean shore, and may be wafted by its breezes to any part of the world at a very small cost; so much so, that iron at this time is imported at a freight of 12 shillings—$2 88—into New York, about one-half of that paid by the Pennsylvania establishments to deliver their iron into the same market Independent of this, we have to contend against her surplus product, which is often shipped here, under the hope of finding a market; and when here, must be sold, and an exportation of specie is the consequence; and the moment that exportation touches the precious metals that are necessary to sustain the moneyed circulation, "the operations of the banks become embarrassed, and distress and misery and bankruptcy are spread throughout all classes of the community."

We should suppose that our importations were large enough to satisfy the desires of the wildest free trader, at least until a corresponding return was made by other countries—for no nation upon earth has gone so far in relaxing her duties, and consuming foreign products. By a recent report made to the British Parliament, it appears that the value of the British manufactures consumed by various nations, is as follows:—

Prussia,	7	cents worth to each person
Russia,	15	" "
Norway,	17	" "
France,	20	" "
United States,	$4 02	" "

And in 1837, Mr. Porter, a British free trade writer, tells us "that their exports to the United States of America, which, with their population of 12,000,000, are situated 3,000 miles from us across the Atlantic, have amounted to more *than half the sum* of a shipment *to the whole* of Europe, with a population *fifteen times* as great as that of the United States."

It is said, however, in a late article upon this subject, "Iron Trade," (Merch. Mag.) that "agriculture, into which the consumption of iron so extensively enters, and which forms the preponderating interest of the country, has sacrificed much to support the protective policy in the high prices created thereby. The price of most of the products of agriculture is at present depressed, and it would materially relieve its burdens, if the duty were in some measure relaxed upon all descriptions of iron."

We did think that if any such notions were even *honestly* entertained, that they would have been dissipated by the experience of the last few years—by those very low prices to which the writer refers. When were our duties lower than in 1840, '41, '42, and when were the products of agriculture more depressed; and did they not fall from 1837, with the reduction of the tariff—*pari passu*? and from which low point they have been gradually advancing, as our furnaces, forges, and rolling mills are put into successful operations.

In 1837 flour was	$9 62½
1838 "	7 93
1839 "	6 92
1840 "	5 43

It would not be a difficult task to show, that for the last century the moneyed price of corn has always been highest among those nations who have been most conspicuous for their manufacturing industry and protective policy. But to come to our experience: by our late census, we raised 600,000,000 bs. (by our latest statistics, 776,000,000 bs.) of breadstuffs; and what has been the annual export of this vast quantity to the entire world? The annual export of flour and wheat, reduced to bushels, to all the countries of the globe, for the last twenty-five years, only amounts to 4,600 bs., about 1,000 bbls. of flour, and only 1,000 bs. or 200 bbls. of this flour is consumed by England. It is generally eaten up at home by those employed in our manufacturing industry—by the 800,000 manufacturers, mechanics, and tradesmen, and the 3,200,000 that either directly or indirectly derive their subsistence from them. Make them producers, and what will be our *surplus product*, and where shall we send it? If the British ports were thrown open to-morrow, our country could not supply that kingdom with any more than she now does, against the Baltic and Black Sea countries, that are able to furnish it at much less prices than this country. The average price of wheat in the New York market, for the last thirty years, has been $1 30 per bs., whilst the average price at the grain-*exporting marts* of Europe has been less than *one dollar*. England imports annually about 12,000,000 bs., and yet we supply only 1,000 bs. of this vast import. In 1831 England imported 27,000,000 bs., and we supplied less than one-sixth.

Nearly all the grain grown in Pennsylvania and New York is consumed by the population of those States, but how small their product, compared with that of the little sea-girt island—they produce 108 millions of all descriptions, whilst she furnishes 1,000 millions with not more than one-half the territory, and a fertility and climate not to be compared to theirs. What has stimulated this great agricultural product, but the wants of her manufacturing industry? Establish a blast furnace and forge in an agricultural district, and what is the immediate effect?—the abstraction of some three hundred men and their families to this establishment, who immediately become consumers—*of what?* of every description of agricultural products, not merely wheat, rye and corn, but beef, pork, and milk, and butter, and eggs, and vegetables—giving to the farmer at his own door a better market than the Atlantic border; and saving to him the heavy charge which the cost of transportation to the Atlantic market creates. We may say that the entire consumption of this establishment is from the farmer; he may own the wood, the limestone, the iron ores, the sand, the fire clay—all that is employed in making this article so necessary to his wants.

In this day of universal peace, when the mind of the entire world for the last thirty years has been devoted to the industrial pursuits—when the "grand agents, profits and loss, have been constantly at work," we should have supposed that this branch of business would have been brought to perfection; but such is not the case, man is still left to invent and watch the movements of his machinery. There is yet much room for invention and economy, and *for the application of improvements, the importance of which have been thoroughly tested;* but the introduction of which into our establishments in this country have been very slow. The most important of these is Detmold's process of the ignited gases, which is now so successfully applied to all the various processes of manufacturing iron. It has long been known that a large proportion of the fuel, used in all the processes, is converted into combustible gases, which escape unconsumed; in the blast furnace it has been demonstrated, that not more than one-fifth of the total heat was available for the fusion of the materials, and the remainder lost for all practical purposes. But although long observed and deeply regretted by the practical iron master, who constantly saw this escape of heat from the tops of his furnaces, by which he was nightly illuminating the *heavens*, yet ages passed without its improvement. By this application, which is now no longer theory, but practically proved and extensively carried out, in Germany and France, and to be seen in several furnaces in this country, we have an actual return of one-half the fuel. This economical plan may be applied to the raising and sustaining of the steam of the blast engine—the remelting of the iron itself—the refining and puddling, and heating and reheating. It is the only mode yet discovered of refining with anthracite or raw coal, and affords a very important saving of iron and fuel, over the ordinary method by *charcoal* or coke in the open finery fire—to use the language of the patentee, "for in the latter the iron is exposed to the oxydizing action of the blast from the *tuyeres*, during the whole period of its melting down, so that a very large proportion of the iron is actually converted into cinder before the whole charge is fused. The loss of iron in the open finery varies from 12 to 15 per cent., but in the operation of refining by this process, the whole charge of iron is melted down, without any loss from oxydation, as no more oxygen is allowed to enter the furnace, than what is required for the combustion of the gases—and the process of decarbonization does not commence until after all the iron is fused—the loss of iron in the furnace is, therefore, much reduced, and rarely exceeds seven per cent., but varying from 5 to 7 per cent. The quantity of coal required to refine a ton of iron is from 6 1-2 cwt. to 7 cwt."

A strong fear has been entertained that the substraction of these gases would prevent the furnace from carrying burden and making a proper quality of iron. But nothing can be further from the fact than this; for the great desideratum, as has been well remarked by Mushat, is to reduce the temperature of the funnel head, which in many furnaces is kept so high as almost entirely to destroy the essential process of deoxydation and cementation, and to precipitate the iron ore into a melting temperature, before it is properly matured by a completion of both operations. This evil is greatly increased by the mode now adopted at many of the furnaces of heating the *boilers* at the funnel head, to say nothing of the awkwardness of such an arrangement, *which* must be always more or less affected by the contraction of the materials of the furnace stack, whilst the new plan of withdrawing these gases, some seven or eight feet from the funnel head, avoids all these inconveniences. But independent of all this, the great economy of this process consists in taking these gases out, at a sufficiently high temperature, to unite with the oxygen of the atmosphere when the two are brought into contact, and thus to inflame, or burn, and give out an *amount of heat, far beyond that of its temperature, when it escaped from the furnace.*

This process has been employed with great advantage and economy, also in puddling and reheating, in several of our largest rolling mills; but in none to greater advantage than in the New Jersey Iron Works at Boonton; and we are happy to have it in our power to furnish the best evidence upon this subject, by giving a copy of a letter from the manager of that establishment, an experienced iron master, to the patentee, soon after its introduction there.

BOONTON, DECEMBER 12th, 1843.

DEAR SIR,

I have just received yours, and hasten to give you the information you desire; I will give you the account of our work for the last week.

There was charged to the double furnace—tons, 30 15 0 24, pig and plate; 3-4 pig and 1-4 plate, which produced—tons, 29 11 2 24 pounds of billets and bars, and consumed 11 cwt. 2 qrs., of anthracite coal, per ton of bars produced. Five single furnaces, for the same time, averaged each—tons, 12 17 3 8 billets and bars, with about the same waste as the double furnace—coal per ton, 14 2 10.

The ball furnace produced, of the heated iron, for the same week, 66 tons, viz: merchantable iron, band, large hoops and billets from blooms, average waste 5½—coal, 5 3 15 per ton of iron produced. The refinery, in the same time, produced 46 tons good metal, waste 6½---coal, 6 0 22 per ton of plate produced. With our old anthracite furnaces, the average waste in puddling was about 6½. Average weekly product of our single furnaces—tons, 12¼ *a* 12½ per week—coal being the same kind of anthracite as we now use, with 21 cwt. per ton of bars produced; in reheating the waste was about 6½, and coal from 7 to 10 cwt. per ton, according to the kind of work done.

When I see you, I can give you more minute information, and hoping to have that pleasure in a few days,

I am, very truly, yours, &c.,

(Copy) HENRY BREVORT.

C. E. DETMOLD, Esq., New York.

What a result has been produced in these operations by the mind of man, and the inquiries induced by chemical science. The economy introduced into this establishment by this process, was a reduction of the *fuel* from 28 to 30 cwt. per ton, to 16 or 18 cwt.—say 12 cwt., and this estimated upon their entire annual production, in dollars and cents, (3000 tons per annum at $2 40 per ton,) will give the large result of $7,200. This process may be readily extended to the puddling and reheating of iron, by the use of wood, and which application would dispense with our present expensive mode of converting wood into charcoal, and be productive of the most important results. It will thus be perceived that this black diamond is not yet to be thrown aside, but by the ingenuity of man, to be placed in many localities upon a footing with our mineral works. Another process is that of Wm. Neele Clay, of Scotland, which if carried out *practically*, will confer great benefit upon the community, and notwithstanding the high perfection of the blast furnace and puddling processes, will produce an equal, if not a greater economy; it is nothing more nor less than the use of mineral coal instead of *charcoal*, in the blooming process, which we have before minutely described. Upon the abandonment of the bloomery and charcoal processes in England, and the establishment of the blast furnace, the rich hematites and primitive ores were entirely excluded, and when used, so reduced by poorer ores, that their great value was lost. We think that it has been left to the science of the present day to improve these inexhaustible stores of mineral wealth, which the God of Nature has bestowed so bountifully upon us, and *certainly* not to remain hidden and buried in the earth. The great value of this process, and which will make it ere long so attractive to Americans, is, that it dispenses with the enormous outlay which is necessary to get up our towering furnaces, with their steam machinery of such gigantic proportions; indeed, the enormous capital necessary to erect an establishment upon a scale commensurate with those in England, has heretofore almost forbid the hope of being able to contend *successfully* with that country in this branch of business. But by this process, a small capital may be made available in producing the best results, and the establishment may be in proportion to the demand for the article, and when that ceases there is no large outlay; indeed, a few thousand dollars will enable every operator to determine what profit there may be, and the competition thus produced, will soon enlist the highest efforts of American skill and industry. These rich primitive ores, as we have shown, exist in inexhaustible quantities, in the immediate neighbourhood of our great anthracite coal fields, and are extensively opened out and located upon many of the great internal improvements of the country, which furnish every facility for their cheap transportation. Mr. Clay's success has been complete and perfect, according to his own statements, with the use of the bituminous coal in a common reverberatory furnace. But the great desideratum is to use the anthracite as the fuel. It has been done successfully in this country, and will, ere long, be carried out in a practical form.

The last discovery is that of Mr. Wall, which we shall give in the language of the celebrated Dr. Ure:

"A great economy in the conversion of the cast into wrought metal, seems about to be effected in our iron works, by the application of a current of voltaic electricity, to the crude iron, in a state of fusion, whether on the hearth of the blast furnace, on the fused pigs in the sand, or on the metal immediately upon its being run from the finery furnace. The voltaic force of from 50 to 100 pairs of a powerful [Smices'] battery, being previously arranged to act upon the whole train of the metal. This process, for which Mr. Arthur Wall has recently obtained a patent, is founded upon the well established principle, that when a compound is subjected to an electrical current, its negative and positive elements are detached from each other. Iron is electro-positive; the elements it contains, when crude—the carbon, the sulphur, phosphorus, arsenic, oxygen and silicon, are electro-negative. By the application of a stream of electricity, to the iron in a state of fusion, these impurities are dislodged. On this principle, I would explain the extraordinary effect of this process, as performed in my presence, in the excellent iron works of Mr. Jessop, at Codner park, in Derbyshire, where the electerized forge pigs discharged those noxious elements so copiously, in the puddling furnace, as to become, after reheating, without filing or fagoting, brilliant bars of the finest fibrous metal. The bars so made, have been subjected, under my inspection, to the severest proofs, by skillful London blacksmiths, and they have been found to bear pinching, hammering, binding and twisting, as well as the best iron in the market. I have also analyzed the said iron, with the utmost minuteness of chemical research, and have ascertained it to be nearly pure metal, containing neither sulphur nor phosphorus, and merely an inappreciable trace of arsenic. I can, therefore, conscientiously recommend Mr. Wall's patent to iron masters, as one of the greatest, easiest and most economical improvements which that important art has ever received. The pecuniary advantage of this process, in respect of saving labour and waste of material, has been estimated, by competent judges, at from £1 to £2 stg. per ton. The effect of electerizing iron is displayed in a singular manner, by the conversion into steel of a soft rod, exposed, in contact with coke, for a few hours to a moderate red heat; a result which I have witnessed and can fully attest."

As great misapprehension prevails in relation to our charcoal furnaces, and as the belief is very general that the mineral coal establishments will render them entirely unproductive, we are happy to furnish, from the highest authority, the low price at which they are now manufacturing iron, from the use of the hot blast—to us almost incredible—and yet we derive it from practical iron masters; and when they have effected so much, who can tell where it will end? The estimates are as follows, viz.:

Materials.	
Charcoal, 93 bs. at 4 cents	$3 72
Ore, 2½ tons at $1 47	3 67
Limestone	30
Labour	3 00
	$10 69

Yield from 55 to 60 tons per week; and this metal is afterwards puddled and worked into bar iron with mineral coal, at a cost of from $2 to $2 50 per ton, without refining. This doubtless has been done, but it surely must be in peculiar localities, possessing advantages very rare and uncommon.

Let us, in conclusion, compare the results obtained, both in England and this country, up to this day, as the chief elements toward forming a correct judgment in relation to the future progress of this business, and also, that it may be distinctly seen in what the difference of cost consists.

	Crawshay Cost.			*United States Cost.*		
		Tons. cwt. lbs. s.			Tons. $ cts.	
Pig Metal	Iron stone	3 00 0 a 6	$4 50	Iron stone	2½ a 1 50	$3 75
	Coke	1 15 0 a 8	3 50	Coal (anth.)	3 a 2 00	6 00
	Limestone	1 00 0 a 3	75	Limestone	1 a 75	75
	Wages	a 6	1 50	Wages	a 1 75	1 75
	General charges	a 6	1 50	General charges.	a 2 00	2 00
			$11 75			$14 25
	Refining.			Refining.		
Plate	Waste	2½ cwt.	1 47	Waste	1½ cwt.	1 06
	Coal	10 cwt. a 8	1 00	Coal	6½ cwt. a 2 00	65
	Refining	a 1 3	37	Labour	a 1 05	1 05
				Repairs, &c.		50
	Puddling.			Puddling.		
Bar Iron	Waste	3½ cwt.	58	Waste	1 cwt.	86
	Coal	18 cwt. a 5	1 12	Coal	18 cwt.	1 80
	Do.	12 cwt. a 5	75	Wages & incidental,		13 02
	Wages		6 15			
			$23 19			$33 19
	Wages as above		1 50	Wages as above		1 75
	" "		37½	" "		1 05
	" "		6 15	" "		13 02
			$8 02			$15 82

Cost of a Ton of Charcoal Iron, as per estimates, in 1810.

Charcoal, 240 bs. at 3 cents	$7 20
Ore; 3 tons, at $2	6 00
Limestone	30
Labour	4 00
Materials, wear and tear	2 50
Capital, &c	3 75
Yield, 800 tons per annum	$23 75
Carriage to forge	5 75
1½ tons, per ton	44 25
Charcoal, 375 bs. at 3 cents	11 25
Labour	13 25
Incidental expenses	2 50
Interest on capital	4 50
	$81 50

Cost of a Ton of Charcoal Iron, as per estimates, in 1845.

Charcoal, 93 bs. at 4 cents	$3 72
Ore, 2½ tons, at $1 47	3 67
Limestone	30
Labour	3 00
Capital	2 00
Yield, 2,600 tons per annum	$12 69
Carriage to rolling mill	3 00
23 cwt. ton per ton	14 58
18 cwt. coal	1 80
Wages and incidentals	13 02
Interest on capital	5 00
Hot Blast	$37 40

From the above estimates of the cost by mineral coal, it will be perceived that the wages of labour, constitute the entire difference of cost per ton; and if the American statesmen are prepared to reduce wages still lower by the reduction of the tariff, and compel our establishments to compete with those of England, our labouring classes must be prepared to renounce their comforts, and sink into the poverty and wretchedness of that condition of the people in the old world. Must it not be self-evident to them, that either our establishments must be abandoned or labour reduced to the same standard? if not, why have they left their own country, separating themselves from relatives and those associations of country, from which our highest and best pleasures spring ?

But under this condition of the manufacture, and with the enormous capital embarked in it, can any reasonable mind entertain a *fear*, that the progress of this business will not be onward, provided the home market is secured ? This is all that is wanted and necessary.

Our present Secretary of the Treasury tells us, that " the foreign consumption of our products, is a mere drop of the bucket in comparison with that of the home market ;" that the aggregate production of the United States, by the census of 1840, is in round numbers $1,000,000,000. Our exports of domestic products by the Treasury report of 1840, amounts to $103,533,896, deducting which, from our whole product, by the census of 1840, $959,600,845, would leave $856,066,949, of our products consumed in that year, by our population of $17,062,453, and the consumption of our domestic products by the population of the world, only amounts to $103,553,896.

Under such circumstances, would it be more disastrous or unwise, for our country to import its breadstuffs than its iron ? Are we more blest in our rich and fertile soil, than in our inexhaustible stores of mineral wealth ? and if they remain undeveloped, it will be because they cannot be improved with profit. Few fortunes have been made in the iron business, and it has sunk enormous amounts. Give to our people remunerating prices, and what American can believe, that the genius and irrepressible spirit of our people will not supply all the wants of the country ? The only danger is, that production will be excessively extended, and prices forced down beyond the desires of any one. Our people aspire to all that is noble in the active and bustling pursuits of life ; and if he, who " causes two blades of grass to grow where one grew before," was worthy of enduring remembrance, how much more he, who assists in preserving us from a deplorable dependency upon a foreign country for this article of first necessity.

BEAR VALLEY COAL AND IRON REGION.

All the *anthracite* coal as yet discovered in the United States, is to be found within the boundaries of the commonwealth of Pennsylvania ; and lies in the three great "measures," known as the southern, middle, and northern coal fields. Each of these coal fields is about 60 miles long, and from three to eight miles wide, and are located between the main branch of the Susquehannah and the Delaware rivers, and nearly at right angles with the general course of those rivers. The Bear Valley coal region forms the western part of the *southern* coal field lying nearest to the Atlantic Ocean, generally considered the richest, and which also embraces the Mauch Chunk, Pottsville, and Pine Grove regions within its boundaries. The superiority of the Bear Valley coal region consists in the fact that the coal lies *above* water level, in veins or layers in the mountains, running parallel with them, and dipping, those in the south mountain to the north, and those in the north mountain to the south; thus forming what is called the "*coal basin.*"

The distance from the Bear Valley coal region, at the head of the Bear Mountain rail road, (now in progress of construction,) to different points, is as follows:

To Harrisburgh	36	miles.
" Lancaster	72	"
" Philadelphia	143	"
" Havre de Grace	108	"
" Baltimore	162	"
" Washington City	200	"
" New York	299	"
" Pittsburgh	286	"

Nearly all the above distances are by cheap water conveyances. The *quantity* of coal to be found in this region *above water level* is almost inexhaustible. Some idea may be formed of the quantity by the following table, which gives the number of coal veins known, and which have been examined in Big Lick Mountain, and through which the Bear Mountain rail road will pass, and will consequently cut the veins at right angles, leaving a "breast" (or height above the road) of about 1160 feet in each vein—commencing at the outside coal vein in Big Lick Mountain, the first cut by the passage of the road or tunnel through the mountain:

No.	
1	coal vein 4 feet thick.
2	" " 7 " "
3	" " 12 " "
4	" " 6 " "
5	" " 3 " "
6	" " 5½ " "
7	" " 3 " "
8	large vein not yet proved.
9	" " " "
10	coal vein 9 feet thick.
11	" " 6 " "
12	vein not yet proved.
13	coal vein 12 feet thick.
14	coal vein not proved.
15	coal vein 5 feet thick.
16	coal vein not yet proved.
17	" " " "
18	large coal vein not proved.
19	" " " "
20	coal vein supposed 18 ft. thick.
21	jugular vein supposed 30 "
22	coal vein 6 feet thick.
23	" " 4 " "
24	" " 3 " "
25	" " 7 " "
26	" " 3 *iron ore and fire clay.*
27	" " 3 *iron ore and fire clay.*
28	coal vein 12 feet thick—*vein of iron ore* 12 *feet thick.*
29	coal vein 5 feet thick.
30	" " 27 " " *vein of iron ore* 6 *feet thick.*
31	coal vein 4 feet thick.
32	" " 2½ " " *vein of iron ore, thickness not yet known*
33	coal vein not yet proved
34	" " " "
35	" " " "
36	" " " "
37	" " " "
38	" " " "
39	" " " "
40	" " " "
41	coal vein 5 feet thick.
42	large coal vein not proved.
43	coal vein not yet proved.
44	" " " "
45	coal vein 6 feet thick.
46	" " 15 "
47	coal vein not yet proved.
48	" " " "
49	coal vein 5 feet thick—*iron ore vein, thickness not known.*
50	coal vein 9 feet thick.

The above table brings the description to the centre of the coal basin, and all the veins in the table dip to the north at an angle of 45 degrees. The above veins are all again repeated in the "North" or "Bear Mountain," which is cut to its base by *Ransh Gap*, and in which gap, many of the coal veins have been opened and partially worked for the last six or seven years. The distance between the veins of coal varies from 10 to 150 feet, and the whole distance from the outside vein (No. 1) to the centre of the coal basin, on a line with the tunnel is about 4,500 feet. Bear Valley at the point above designated is very narrow, and a line drawn from the base of the South Mountain, through Bear Valley and Bear Mountain, to the base of the latter, thus cutting through each coal vein twice, or, equal to 100 coal veins, would be less than two miles long. Nearly one-half of the veins are already divided by nature in Ransh Gap, on a level with which the B. M. coal tunnel will terminate. This road, when completed, will pass through about 100 veins of superiour anthracite coal, each of which will have a "breast" of more than 1000 feet above the level of the road, and rising in thickness from 2 1-2 to 30 feet each.

The *quality* of the coal above described may be ascertained by the following analysis, made by Professor Johnson, of Philadelphia. The specimens, however, for this analysis, were obtained from the same veins, but seven miles further west than Ransh Gap, and within three miles of the terminus of the coal basin. To show how nearly this coal resembles the Welsh anthracite, so extensively used at the Crane Works, and elsewhere, in Great Britain, for smelting iron, we give the analysis of the two together, the Yniscedwyn as tested by Mr. Mushat and Mr. Frazer.

	Sp. Gr.	Vol. Mat.	Carbon.	Ashes.
Yniscedwyn Coal,	1.354	8.072	87.599	4.320
Bear Valley Coal,	1.390	8.066	87.360	4.572

In the Report recently made by Professor Johnson, "to the Navy Department of the United States on American Coals," he says in relation to this coal (page 121)—"Its action under the steam-boiler was highly satisfactory. Its considerable portion of volatile matter, which burns with a clear yellow flame, of moderate length and brilliancy, without the slightest appearance of smoke, and without requiring a very powerful draught to sustain and quicken the combustion, gives it a decided advantage for avoiding that waste which arises from a violent artificial blast."

This coal has never yet been used in this country for the smelting of iron, but its fitness for this purpose may be judged of, by another extract from the same Report, page 130.

"The facility with which these materials are fused, would, in the case of employing this anthracite for the smelting of iron, afford the advantage of a ready conversion into cinder, creating no additional demand for *flux*, and requiring no great elevation of temperature for that purpose."

It will be seen that in immediate and close proximity with this coal are large quantities of iron ore. The "*Black Band Ore*," recently discovered at Ransh Gap in great abundance, is not known in any other section of the United States, and as it is found overlaying the coal, and can be mined and placed in a furnace for less than *fifty cents per ton*, its importance will be understood and appreciated by every man conversant with the manufacture of iron. There are, however, four different kinds of iron ore found at this point, viz: black band; kidney, or ball ore; hematite, or pipe ore, and bog ore. The three first mentioned have been analyzed by the first chemists in this country, and the result is given below. All the ores mentioned below are found in great abundance, and all except the bog ore, lie in veins or layers running parallel with the veins of coal, and having the same inclination or dip, and the same height or breast above the Bear Mountain tunnel and road.

No. 1.—*Carbonaceous Carbonate of Iron—Black Band.*

	100 parts.
Carbonic acid and water,	31.36
Carbon,	6.75
Protoxide of iron,	50.63
Alumina,	0.14
Lime,	0.22
Magnesia,	0.90
Silica,	10.00
	100

Metallic iron, 39.10 per cent.

It loses by roasting 32.35 per cent., and contains *then* 57.89 per cent. of metallic iron, and 14.79 silica.

No. 2.—*Kidney Ore.*

Peroxide of iron,	69.90
Alumina,	0.35
Lime,	traces.
Magnesia,	00
Silica,	17.50
Water,	12.25
	100

It contains 48.47 per cent. of metallic iron.

No. 3.—*Brown Hematite, or Pipe Ore.*

Peroxide of iron,	70.90
Alumina,	0.15
Silica,	16.90
Water,	12.05
	100

Metallic iron, 49.16 per cent.

The whole of this rich iron and coal region is about to be opened by the completion of the Bear Mountain rail road, which is 28 miles in length, commencing in the coal mountain above described, and terminating on the Pennsylvania canal, at Dauphin, eight miles above Harrisburgh, and 80 from Havre de Grace. The rail road has a decending grade from the coal and iron mines, for the first 11 miles, of 16 feet and 4 inches to each mile; and the balance of the distance to Dauphin, of 16 feet and 11 inches to each mile. The work will be done in the most substantial and durable manner, with a heavy H rail, and is under contract to be finished the present year.

The country surrounding the coal and iron region at the head of the Bear Mountain rail road, is a fine farming district, capable of supporting a large manufacturing population, and it is from this district that the market of Pottsville and its vicinity (distant 25 miles) has been supplied for the last ten years.

Finally, this coal and iron can be mined and put into a smelting furnace at Ransh Gap or Bearmont, for less than 75 cents per ton, and that by a *decending* grade from the mouth of the mine to the "*tunnel head*" of such furnace.

A FEW WORDS ABOUT COTTON AND HEMP.

A FRIEND from the south, whose knowledge of the Southern States and of Texas may be relied on, has furnished us with the following facts.

"The cotton crop of the United States, in 1824, was but 560,000 bales. In 1843 it was 2,378,875. The following table shows the progressive increase:

Total crop of 1824—5	bales, 560,000	1834—5	bales, 1,254,328
1825—6	710,000	1825—6	1,360,725
1826—7	937,000	1836—7	1,422,930
1827—8	712,000	1837—8	1,801,497
1828—9	857,744	1838—9	1,360,532
1829-30	976,845	1839-40	2,177,835
1830—1	1,038,848	1840—1	1,634,945
1831—2	987,477	1841—2	1,683,574
1832—3	1,070,438	1842—3	2,378,875
1833—4	1,205,394	1843—4	2,030,409

Of the crop of 1844, the product of the several States was:

New Orleans	bales, 1,060,246
Alabama	481,714
Florida	161,088
Georgia	299,491
South Carolina	351,658
North Carolina	9,039
Virginia	12,139
Received at Philadelphia and Baltimore, over land	3,500
	2,378,875

An analysis of these tables shows, that a very large part of the increased production comes from the new lands of Georgia, Alabama, Mississippi and Arkansas, brought under cultivation since the year 1829.

The greater part of the cotton crop is produced by slave labour. The census of 1840 gives 1,641,811 as the number of slaves in North and South Carolina, Georgia, Alabama, Mississippi, Louisiana and Tennessee; of these there were 1,105,005 males and females over ten years of age. If we make the proper deduction for those who are otherwise employed of this number, not more than 700,000, in round numbers, are employed in the culture of cotton. It is admitted that three bales to the hand is as much as the average product; this gives 2,100,000 bales as the extent of the produce of clear labour.*

It matters not, therefore, how rich or well suited to the cultivation of cotton Texas may be, the cotton crop will depend upon the labour employed and not upon the land suited to its production. A portion of white labour will be thus employed, and slaves will be sent into the cotton growing districts from Maryland, Virginia, Kentucky, Tennessee and North Carolina—but it is believed that this will be in a great measure arrested by a new process, lately patented, for water-rotting hemp and flax, which will render labour more productive in the cultivation of hemp and flax than of cotton. Messrs. Billings & Harrison, of Howard county, Missouri, have taken out patents, for a process of preparing hemp and flax for market, by which it is said that hemp can be water-rotted and prepared for market, in five days from the time it is cut in the field; that the quality is better than if prepared by any process heretofore in use, and that the expense is so much reduced, that hemp will yield a more certain and more profitable crop than cotton or wheat.

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* We publish the calculation here made, from great respect for the source whence it is derived. We deem it, however, proper to add, that there are those equally entitled to confidence who think the coming crop of cotton will reach nearly to 3,000,000 of bales. We trust this will prove an over estimate, as it will greatly exceed the consumption, and severely affect the already reduced price.—EDITOR.

How far hemp and flax will enter into competition with, and thus diminish the consumption of cotton, remains to be seen; but the fact that the culture of hemp will give greater and more certain profits, and that the climate and soil of the northern slaveholding States are well suited to its growth, justify a belief that the increasing demand for labour in these States will prevent the transfer of many slaves from the hemp to the cotton growing States. It follows, therefore, that the increase of the cotton crop from henceforth, will not much exceed two and a half per cent. per annum on the present crop, that being the ratio of the increase of slave labour, while the increased consumption of cotton will be at something like the same ratio on the consuming population, which being in a much greater proportion, it follows that the price of cotton will most probably advance.

The discovery of Messrs. Billings & Harrison will add untold millions to the value of the agricultural products of the United States. The advantage of the hemp over the cotton culture will be, that machinery is brought to aid in the planting, reaping, and the preparing the hemp for market. In the whole process one man is made to do the work of many; science and mechanism come to the aid of man, and multiply his powers and augment his profits. If these data be correct—and they are given from a source entitled to confidence—the planter has reached the point of greatest depression."

COMMERCE AND NAVIGATION OF THE UNITED STATES.

We briefly noticed in our last number the annual report of the Secretary of the Treasury, on the commerce and navigation of the United States, for the year ending June 30, 1844, and gave a summary of a few of the most important statements contained in the document. We now present the following additional tables, made up from the same report, in which we have endeavoured to show the condition of our trade and commerce with foreign countries, their bearing upon our industrial pursuits, and a comparison of the operation of our present tariff with that of the lowest rate of duties, which was reached under the compromise tariff in

1842, previous to the enactment of the present revenue law, which went into operation on the 1st of September, 1842 :

	Year ending June 30, 1844.	Year ending Sept. 30, 1842.
Exports from the United States,	$111,290,046	104,691,534
Viz: of domestic articles,	99,715,179	92,969,996
" of foreign articles,	11,484,867	11,721,538
Imports into the United States,	108,435,035	100,162,087
Imports of specie and bullion,	5,830,429	4,087,016
Exports of " " including domestic coin,	5,454,214	4,813,459
Domestic gold and silver coin exported, included in the above,	183,405	1,170,754
Exports of cotton, tobacco, and rice,	64,643,224	59,041,606
" of all other domestic articles,	35,071,955	33,928,390
The exports of domestic articles are classed as follows, viz:		
Products of the sea,	3,350,501	2,823,010
" of the forest,	5,806,712	5,518,262
" of agriculture,	79,938,410	73,688,113
" of manufactures,	9,762,129	9,581,448
Articles not enumerated,	854,427	1,359,163

Comparative view of Exports and Imports for the last five years.

		Imports.		
Year ending	Exports.	Free of duty.	Dutiable.	Total.
Sept. 30, 1840,	$132,085,946	$57,196,204	$49,945,415	$107,141,519
" 1841,	121,851,803	66,019,731	61,926,446	127,946,177
" 1842,	104,691,534	30,627,486	69,534,601	100,162,087
June 30, 1843, (9 mos.)	84,346,480	35,574,584	29,179,215	64,753,799
" 1844,	111,200,046	24,766,881	83,668,154	108,435,035

Articles imported free of duty, and exports of the same, for the year ending June 30, 1844.

	Imports.	Exports.
Specie and bullion,	$5,830,429	$5,270,809
Teas,	4,021,979	922,970
Coffee,	8,262,644	540,579
Copper, in sheets, pigs, bars, and old,	1,313,881	100,045
Brass, in pigs, bars, and old,	49,241	....
Dye wood, in sticks,	428,049	....
Barilla,	50,394	831,902
Burr stones, unwrought,	17,008	....
Crude brimstone,	75,124	....
Articles imported for the use of the United States,	95,438	....
Philosophical apparatus, for colleges, &c., also books, maps, &c., for the same,	21,127	....
Statuary, busts, &c.,	85	....
Paintings, drawings, &c.,	3,434	....
Wood, unmanufactured, not specified,	38,218	....
Specimens of botany, minerals, &c.,	15,786	....
Models and inventions of machinery,	2,737	....
Anatomical preparations,	1,879	....
Crude antimony,	104	....
Bark of the cork tree,	11,505	....
Clay, unwrought,	5,697	....
Animals for breed,	27,534	....
Nuts and berries used in dyeing,	804	....
Old pewter,	252	....
Paintings of American artists,	2,017	....
Gypsum, or Plaster of Paris,	80,292	....
Epaulets, or wings of gold or silver,	301	....
Other articles not enumerated in Report,	3,024,643	356,054
Total,	$24,766,881	$7,522,359

Comparative view of some of the principal manufactured articles, and raw materials imported, in 1844 *and* 1842.

	1844.	1842.
Woollen manufactures,	$9,108,278	$8,043,127
Cotton "	13,641,478	9,578,515
Silk "	8,463,179	9,468,298
Silk & worsted "	1,292,498	1,311,770
Lace, thread and cotton,	982,675	657,982
Flax, manufactures,	4,492,826	3,669,231
Hempen "	500,018	334,830
Clothing,	931,061	28,312
Carpeting, (wool,)	289,475	242,309
Sail duck,	350,317	516,580
Cotton bagging,	153,094	421,824
Cordage, twine and seines,	198,658	165,079
Hemp, unmanufactured,	262,365	267,849
" Manilla, grass, &c.,	238,077	....
Flax, unmanufactured,	67,738	....
Paper rags,	295,586	468,220
Cotton, unmanufactured,	651,326	414,651
Indigo,	1,145,067	749,505
Wool, not over 7 cents per lb.,	754,441	685,649
" over 7 "	97,019	111,733
Iron and steel,	2,867,489	3,995,671
Manufactures of iron and steel,	3,241,581	3,572,081
Earthen, stone, and China wares,	1,633,482	1,557,961
Watches, and parts of watches,	487,142	399,424
Jewelry,	102,107	110,474
Hats and bonnets, Leghorn, &c.,	737,733	574,876
Furs,	849,297	503,030
Cigars,	974,431	860,742
Sugar, brown,	6,793,540	5,434,750
" white,	267,704	936,025
" refined,	134,454	132,659
Salt,	911,512	841,572
Coal,	236,963	380,635
Glass, manufactures,	302,765	558,509
Plated and gilt "	123,855	110,234
Japanned "	26,367	25,566
Manufactures of copper,	136,676	81,200
" brass,	82,411	162,362
" tin,	28,599	25,255
Saddlery,	162,630	158,645
Manufactures of leather,	779,707	890,294
" wood,	80,720	254,466
Buttons,	37,201	....
Paper,	122,153	48,338
Books,	198,672	167,200
Spirits, from grain,	171,015	226,583
" from other materials,	78,027	179,288
Brandy,	606,633	480,995
Wines,	909,005	1,271,009
Cordials,	23,302	....
Beer, ale, and porter,	123,714	106,488
Molasses,	2,633,753	1,942,575
Bleaching powder,	111,092	....
Mahogany and rose wood,	200,579	....

Articles not enumerated.

A large amount of articles imported is thus given as non-enumerated, in the Report for 1844, viz:—

Free of duty,	$3,024,643
At 1 per cent. duty,	240,881
At 2½ per cent.,	1,369,319

At 5 per cent.,	$4,187,074
At 7 and 7½ per cent.,	49,994
At 10 per cent ,	165,458
At 12½ per cent.,	5,181
At 15 per cent.,	223,938
At 20 per cent.,	2,280,049
At 25 per cent.,	1,092,661
At 30 per cent.,	973,244
At 35 per cent.,	34,771
	$13,647,213

It thus appears, that the very large amount of over *thirteen millions and a half of dollars*, being one-eighth of our whole importations, is put down in the official report of the Secretary of the Treasury, as non-enumerated articles. This includes the important articles of hides and skins, unmanufactured; tin, madder, and many other commodities used in our manufactories. Surely, every article imported, where the amount exceeds a thousand dollars, should be specified in the official reports.

The list of manufactured articles imported, as given above, shows the prosperous condition of many branches of manufactures in the United States; inasmuch as the reduced and limited amount of many articles imported, compared with the wants of our largely increased population, proves that the supplies for consumption are now principally derived from our own manufactures. This is especially true of those branches which are most efficiently protected by the tariff.

The gross amount of duties collected on imports for the year ending June 30, 1844, (as we stated in our last number,) was $29,137,060, being about 33 1-2 per cent. on the amount of dutiable articles, which was $83,668,154.

Exports of Foreign Merchandise.

The amount of foreign merchandise exported from the United States, for the year ending June 30, 1844, was as follows:

Value of merchandise free of duty,	$7,522,359
Value of dutiable articles,	3,962,508
Total,	$11,484,867

The principal articles free of duty exported, are stated at p. 177. Among the dutiable articles exported, are the following: Cotton, $771,285, which had been mostly imported from Texas; sugar, $311,588; silks, $237,940; cotton manufactures, $404,648; woollen manufactures, $60,866; flax manufactures, $129,726; hemp manufactures, $113,671; sail duck, $23,172; cordage, $92,403; coal, $33,282; cigars, $60,850.

Exports of Domestic Articles.

Agriculture.	1844.	1842.
Cotton,	$54,063,501	$47,593,464
Tobacco,	8,397,255	9,540,755
Rice,	2,182,468	1,907,387
	$64,643,224	$59,041,606
Flour,	6,759,488	7,375,356
Wheat,	500,400	916,616
Indian corn,	404,008	345,150
Indian meal,	641,029	617,817
Rye meal,	104,391	124,396
Rye, oats, and other grain,	133,477	175,082

	1844.	1842.
Biscuit or ship bread,	$386,603	$323,759
Potatoes,	74,108	85,844
Apples,	51,465	32,345
Beef, tallow, hides, and horned cattle,	1,810,551	1,212,638
Butter and cheese,	758,829	388,185
Salt pork, bacon, lard, live hogs,	3,236,479	2,629,403
Horses and mules,	315,696	299,654
Sheep,	27,824	38,892
Flaxseed,	23,749	34,991
Hops,	51,550	36,547
Brown sugar,	12,363	8,890
Indigo,	1,176	1,042
Total agriculture,	$79,938,410	$73,688,113
Manufactures.		
Cotton goods,	$2,898,780	$2,970,690
Wearing apparel,	117,570	53,219
Leather, boots, and shoes,	204,000	168,925
Leather and morocco skins,	39,197	22,502
Soap, and tallow candles,	619,544	485,128
Household furniture,	327,938	290,997
Carriages,	63,931	48,509
Saddlery,	34,552	25,986
Hats,	75,649	65,882
Wax,	278,039	103,626
Spirits from grain,	56,697	50,708
Spirits from molasses,	241,604	247,745
Beer, ale, porter, and cider,	59,312	54,674
Sugar, refined,	128,594	291,499
Snuff, and tobacco,	536,600	525,490
Lead,	595,238	523,428
Linseed oil, and spirits of turpentine,	68,476	34,775
Cordage,	49,242	30,457
Iron, pig, bar and nails,	133,522	120,454
Iron castings,	54,598	68,507
Iron manufactures,	528,212	920,561
Gunpowder,	130,923	161,292
Copper, and brass,	91,446	97,021
Medicinal drugs,	166,805	139,313
Chocolate,	2,150	3,094
Flax and hemp manufactures,	311	1,038
Combs and buttons,	30,778	34,714
Brushes,	5,962	1,925
Billiard tables and apparatus,	2,534	1,800
Umbrellas and parasols,	6,514	5,838
Printing presses and type,	36,243	19,611
Musical instruments,	17,050	16,253
Books and maps,	42,432	44,846
Paper and stationery,	83,108	69,862
Paints and varnishes,	44,060	27,370
Vinegar,	8,315	10,208
Earthen and stone ware,	4,884	7,618
Manufactures of glass,	77,860	36,748
" of tin,	6,421	5,682
" of pewter and lead,	10,018	16,789
" of marble and stone,	19,135	18,921
" of gold and silver,	2,638	1,323
Gold and silver coin,	183,405	1,170,754
Artificial flowers and jewelry,	6,761	7,638
Trunks,	7,481	3,916
Bricks and lime,	12,833	5,728
Domestic salt,	47,755	39,064
Molasses,	3,922	19,040
Manufactured articles not enumerated,	1,600,090	510,280

Manufactures classed under other heads in the Report.

	1844.	1842.
Manufactures of wood,	$919,100	$623,718
Naval stores, tar, pitch, rosin and turpentine,	818,692	743,329
Pot and pearl ashes,	1,140,848	852,741
Spermaceti oil,	344,930	233,114
Spermaceti candles,	180,492	318,997
Total manufactures,	$13,167,191	$12,383,347

Exports of other articles—products of the sea and forest.

Dried fish, or codfisheries and mackarel,	699,836	567,782
Pickled do., or river fisheries,	197,179	162,324
Whale and other fish oil,	1,464,968	1,315,411
Whalebone,	463,096	225,382
Skins and furs,	742,196	598,487
Ginseng,	95,008	63,702
Staves, shingles, boards and hewn timber,	1,672,279	2,203,537
Other lumber,	326,945	253,931
Masts and spars,	23,274	37,730
Oak bark and other dye,	70,370	111,087
Total,	$5,755,149	$5,539,373
Articles not enumerated,	$854,427	$1,359,163
Total amount of exports of domestic produce and manufactures,	$99,715,179	$92,969,996

Exports of Cotton for the year ending June 30, 1844.

England,	$37,791,825	
Scotland,	1,764,526	
Ireland,	35,000	
Gibraltar,	7,555	
British American Colonies,	96,843—	$39,695,749
France on the Atlantic,	9,331,310	
France on the Mediterranean,	568,225	
French West Indies,	504—	9,900,039
Spain,	358,978	
Cuba,	540,183—	899,161
Italy,	140,721	
Sardinia,	75,828	
Sicily,	12,188—	228,737
Trieste, &c.,		1,008,088
Turkey, Levant, &c.,		1,337
Russia,		241,454
Sweden and Norway,		100,293
Denmark,		1,653
Hanse Towns,		432,687
Holland,		228,520
Belgium,		760,391
Mexico,		552,750
Texas,		11,200
Cisplatine Republic,		1,442
Total,		$54,063,501

Statistical View of the Commerce of the United States with Foreign Nations, for the year ending June 30, 1844.

Europe (including Islands.)	Value of Exports. Domestic produce.	Value of Exports. Foreign produce.	Total exports.	Value of imports.
Russia,	$414,882	$140,532	$555,414	$1,059,419
Prussia,	194,606	23,068	218,574	12,609
Sweden and Norway	217,870	12,231	230,101	421,834
Denmark,	100,859	11,975	112,834	6,063
Holland,	2,517,921	181,023	2,698,944	1,310,065
Belgium,	1,852,571	151,230	2,003,801	634,777

	Value of Exports.		Total	Value of
Europe (including Islands.)	Domestic produce.	Foreign produce.	exports.	imports.
Hanse Towns,....................	$3,174,483	$392,204	$3,566,687	$2,136,386
England,.........................	45,814,942	1,125,214	46,940,156	41,476,081
Scotland,........................	1,936,591	16,882	1,953,473	527,239
Ireland,.........................	42,591	....	42,591	88,084
Gibraltar,.......................	502,462	77,421	579,883	44,274
Malta,...........................	9,752	7,246	16,998	15
France on the Atlantic,..........	11,861,419	2,287,084	14,148,503	15,946,166
France on the Mediterranean,.....	1,204,793	85,104	1,289,897	1,603,318
Spain,...........................	585,397	47,148	632,545	633,364
Teneriffe and other Canaries,....	14,493	1,042	15,535	61,653
Portugal,........................	99,553	3,565	103,118	190,705
Madeira,.........................	44,763	7,523	52,286	22,904
Azores,..........................	19,246	6,983	26,229	29,570
Cape de Verd Islands,............	65,238	5,299	70,537	4,836
Italy,...........................	318,566	258,257	576,823	1,096,926
Sicily,..........................	75,624	278,692	354,316	462,773
Sardinia,........................	92,522	....	92,522	....
Trieste,.........................	1,257,285	168,735	1,426,020	232,089
Turkey, in Europe and Asia,......	186,139	97,245	283,384	385,866
Europe generally,................	28,700	....	28,700	....
Total,...........................			$78,019,871	$68,396,032
Asia, Africa, and Pacific Islands.				
British East Indies,.............	338,413	337,553	675,966	882,792
Dutch East Indies,...............	98,313	261,070	359,383	935,984
Australia,.......................	29,667	....	29,667	122
Cape of Good Hope,...............	82,938	....	82,938	29,166
Bourbon,.........................	16,967	....	16,967	....
Manilla and Phillippines,........	91,769	131,228	222,997	724,811
China,...........................	1,110,023	646,918	1,756,941	4,931,255
Asia generally,..................	173,021	289,641	462,662	34,908
Africa generally,................	641,306	68,938	710,244	459,237
Morocco,.........................	....	....	....	5,876
South Seas,......................	307,353	42,026	349,379	41,504
Total,...........................			$4,667,144	$8,045,655
American States and Colonies.				
British American Colonies,.......	5,361,186	1,354,717	6,715,903	1,465,715
Honduras,........................	197,495	41,524	239,019	248,343
Texas,...........................	196,447	81,101	277,548	678,551
Mexico,..........................	1,292,752	502,081	1,794,833	2,387,002
Central America,.................	103,377	46,899	150,276	223,408
Venezuela,.......................	442,491	88,741	531,232	1,435,479
New Grenada,.....................	75,621	49,225	124,846	189,616
Dutch Guiana,....................	66,980	4,792	71,772	49,144
British Guiana,..................	307,052	2,184	309,236	9,385
French Guiana,...................	56,006	1,033	57,039	28,233
Miquelon and French fisheries,...	3,484	....	3,484	....
Brazil,..........................	2,409,418	408,834	2,818,252	6,883,806
Argentine Republic,..............	245,339	258,950	504,289	1,421,192
Cisplatine Republic,.............	394,266	67,910	462,176	144,763
Chili,...........................	856,645	248,576	1,105,221	750,370
Peru,............................	14,053	2,754	16,807	184,424
South America generally,.........	125,938	....	125,938	....
N. W. cost of America,...........	....	2,178	2,178	....
Total,...........................			$15,810,049	$16,099,431
West Indies.				
Cuba,............................	4,304,062	934,533	5,238,595	9,930,421
Other Spanish West Indies,.......	636,962	5,177	642,139	2,425,202
British West Indies,.............	4,114,218	21,828	4,136,046	687,906
Dutch West Indies,...............	303,438	19,848	323,286	386,266

	Value of Exports.			
	Domestic produce.	Foreign produce.	Total exports.	Value of imports.
Swedish West Indies,............	$63,884	$1,360	$65,244	$23,719
Danish West Indies,.............	783,192	87,130	870,322	624,447
French West Indies, ...	581,568	35,978	617,546	374,645
Hayti,...................... ...	1,082,807	45,549	1,128,356	1,441,244
West Indies generally, ...	173,460	7,988	181,448	....
Total West Indies,..............			$13,197,982	$15,893,920
Grand total,....................			$111,200,046	$108,435,035

INTERNAL IMPROVEMENTS.

STATE OF NEW YORK.

The Annual Report of the Commissioners of the Canal Fund of the State of New York, made to the Legislature on the 8th May, 1845, presenting statistics of the tolls, tonnage and trade of the New York canals, is a very interesting document, furnishing the most elaborate account of the internal commerce of a large section of the United States.

Before noticing some of the most important items in this report, it may be interesting to some of our readers to be furnished with a brief sketch of the rise and progress of the canals of New York, which have been constructed by the enterprise and resources of the State, and have contributed largely to advance the prosperity, not only of New York, but of other States bordering on our northern and western lakes and rivers.

To satisfy the curiosity of inquirers, who very naturally desired to be informed who first projected the system of inland navigation from the lakes to the Hudson and the Atlantic Ocean, the late Doctor Hosack, in his memoir of Dewitt Clinton, examined the subject with impartiality and ability, and gave the result of his investigations in that work, from which we make a few extracts:

"The contributors to canal navigation in the State of New York, may be considered as consisting of four great classes; in the first, may be enumerated those foreseeing and predicting from the general face of the country, the union of the lakes, the creeks and rivers of the west, by measures calculated to remove obstructions, improve the natural navigation then existing, and ultimately, by different outlets, to connect the same with the ocean. In this class, the names of Cadwallader Colden, Sir Henry Moore, George Washington, George Clinton, and Gouverneur Morris, are prominent. In the second class, are to be noticed those who proposed by artificial navigation or canals to form a connexion between the waters of the Hudson and Lake Ontario, Lake Erie, or both. Christopher Colles, Jeffrey Smith, Elkanah Watson, Philip Schuyler, Jesse Hawley, and Joshua Forman, deserve the most honourable mention in this place. Thirdly, those who in the memorable year 1810, have been chiefly instrumental in effecting a direct internal communication between Lake Erie and the Atlantic: in this class, Thomas Eddy, Jonas Platt, and Dewitt Clinton, stand conspicuous. Fourthly, another class of benefactors to this great work is composed of numerous members of both houses of the Legislature, who took a prominent station in devising and sustaining the measures necessary to carry the same into effect; the various canal commissioners, engineers, surveyors, and many private but public spirited citizens in various parts of the State, who have zealously given their personal attentions and services to this herculean undertaking, and to whom too much praise cannot be ascribed; so great is the number composing this class, that I am compelled at this time to forbear from their enumeration. The commissioners of the canal fund, as distinguished from that of canal commissioners, and composed of the Lieutenant Governor, the Comptroller, the Attorney General, the Surveyor General, the Secretary and Treasurer, are entitled to high approbation for their intelligent and faithful discharge of the duties assigned them. To all these different classes of coadjutors, may be ascribed a high and enviable measure of applause.

" The sagacity of some in early perceiving the practicability and utility of the inland communication, the diligence and zeal of others in unremitted exertions to accomplish it, and the devotion and sacrifices of all to its completion, will be remembered by their successors with everlasting gratitude.

" Passing over the early views which the face of the country suggested to the first settlers and traders who successively occupied the northern and western parts of the State, it may be remarked that to Cadwallader Colden, the Surveyor General of the province of New York, afterwards elevated to the office of its Lieutenant Governor, our acknowledgments are due, as among the first to foresee and predict the great results that have been realized. He appears, at the very early period of 1724, to have conceived the grand and elevated scheme of internal improvement in some degree corresponding with that which has been adopted and carried into operation; for even at that time, his views embraced a line of communication from the Hudson, by the lakes, to the Mississippi and the ocean. In his report on the fur trade, addressed to his Excellency William Burnet, Governor of the province, after noticing the commercial establishments at Quebec and Montreal, and their trade with Schenectady and Albany, he points out the superiour advantages arising from a more southern and western intercourse between the colony and the Indian traders, by means of the lakes and the other water communications of that country, and describes with minute accuracy, the various stages of its progress, designating the passage from Albany to Lake Ontario, by the Mohawk, Oneida, and Onondaga rivers, as preferable to the usual liue of transportation then pursued by the Hudson, Lake Champlain, Montreal, and the St. Lawrence; adding in his emphatic language, " that by means of the Mississippi and the lakes, there is opened such a scene of inland navigation that cannot be paralleled in any other part of the world."

From Doctor Hosack's memoir we also learn, that after the treaty of Paris in 1763, the improvement of our inland navigation attracted the attention of the colonial government of New York still further than it had done in the days of Governor Burnet.

Sir Henry Moore, Governor of the province, in December, 1768, in a message to the colonial legislature, called their attention to the subject, and recommended " the improvement of our inland navigation as a matter of the greatest importance to the province," and further recommended that the obstructions in the navigation of the Mohawk River, between Schenectady and Fort Stanwix, be remedied by sluices on the plan of the canal of Languedoc, in France. "The interesting presages, the luminous views of Gouverneur Morris as early as 1777, and still more amply expressed in 1800, relative to the communications which he confidently anticipated between the Hudson and the lakes, also merit our notice."

General Washington, in a letter to Governor Harrison, of Virginia, in 1784, while recommending internal improvements in Virginia, alludes to the prospect of his own State being at no distant period anticipated by the State of New York, in connecting by canals the western waters with those of the Atlantic.

Various suggestions and surveys on the subject were made between the years 1784 and 1792, during which the State was indebted to the valuable services and enterprise of Christopher Colles, Jeffrey Smith, and Elkanah Watson, aided by the co-operation of Gov. George Clinton and General Philip Schuyler; in consequence of which, the western and northern inland lock navigation companies were incorporated in 1792, by which communications (although imperfect) were opened by canals, and the improvements of rivers and creeks, between the Mohawk River, Seneca Lake, and Lake Ontario, also between the Hudson River and Lake Champlain.

In 1807, Jesse Hawley published a series of essays in the Ontario Messenger, recommending a canal from Lake Erie to the Mohawk River; and it is worthy of remark, that he advised that the canal should be one hundred feet in width, and ten feet in depth. The report of Mr. Gallatin on roads and canals, made to Congress the same year, with a communication from Robert Fulton accompanying the same, attracted much of the public attention to the subject. The act of the Legislature of New York, proposed by Joshua Forman, in 1808, authorizing surveys, which were effected by James Geddes, under the direction of Simeon De Witt, then Surveyor General, first established the practicability of a direct canal to Lake Erie, by the interiour route. Gen. Peter B. Porter, at the same time, rendered valuable services to the public in promoting the subject of internal improvement, particularly in his speech delivered in Congress in February, 1810, and subsequently by acting as commissioner.

The first Board of Canal Commissioners, appointed by the Legislature in 1810, were Gouverneur Morris, Stephen Van Rensselaer, De Witt Clinton, Simeon De Witt, William North, Thomas Eddy, and Peter B. Porter. Mr. Clinton was then a member of the State Senate, and Mr. Van Rensselaer of the Assembly, and they both zealously co-operated with Judge Platt, who introduced the resolutions directing the surveys, in the Senate. It was seconded and supported by Mr. Clinton, and passed both houses unanimously. From that time, "Mr. Clinton devoted the best powers of his vigorous and capacious mind to the subject, as an object of the highest public utility, and worthy of his highest ambition."

The commissioners above named, in the winter of 1811, submitted to the Legislature an unanimous report drawn by Gouverneur Morris, giving the results of their surveys, and recommending a canal from Lake Erie to the Hudson River. The cost of the canal was estimated in the report at five millions of dollars.

The magnitude of the project, and the intervention of the war with Great Britain, prevented the commencement of work on the canals, until

1817, when the first excavation on the Erie Canal took place, on the section between Rome and Utica. The first work was also commenced on the Champlain Canal the same year.

The dimensions of the Erie Canal were determined by the commissioners in 1817, viz: width on the surface forty feet, at the bottom twenty-eight feet, and depth of water four feet. In deciding upon these diminutive dimensions, which experience has demonstrated are quite insufficient for the immense trade of the canal, the commissioners were, doubtless, influenced by motives of economy, and an apprehension that the expense of a work of more adequate capacity might not be sustained by the people. An opinion, too, seems to have been entertained by them that such a canal would accommodate the trade, as they remark, that "vessels carrying one hundred tons, may navigate a canal of this size, and all the lumber produced in the country and required for market, may be transported upon it."

The small capacity of the Erie Canal as originally constructed, is shown by a comparison of its dimensions with that of other important canals in Europe and America, thus demonstrating the wisdom of the policy of the enlargement of the Erie Canal, as adopted by the commissioners in 1835.

The canal of Languedoc in France, is 144 feet in width, (including the towing paths,) and 6 feet in depth; the canals of Holland are generally 60 feet in width, by 6 feet in depth; the Clyde Canal in Scotland is 56 feet wide and 10 feet deep; the Grand Canal of Ireland, 40 feet wide, and 6 feet deep; the Chesapeake and Ohio Canal is from 50 to 60 feet wide, by 6 feet in depth; the Delaware and Chesapeake Canal, 66 feet wide, by 10 feet deep; the Tide Water (Susquehannah) Canal, 50 feet wide, and 5 feet deep; the Delaware and Raritan Canal, 75 feet wide, by 7 feet in depth; the Lehigh Canal, 60 feet wide, by 5 feet in depth.

The Erie and Champlain Canals were completed and opened for navigation throughout their entire length, in October, 1825—eight years from their commencement. The other canals constructed by the State, called lateral canals, are as follows: The Oswego Canal, commenced in 1826, completed in 1828; the Cayuga and Seneca Canal, commenced in 1827, completed in 1829; the Chemung Canal, commenced in 1830, completed in 1833; the Crooked Lake Canal, commenced in 1830, completed in 1833; the Chenango Canal, commenced in 1833, and completed in 1837. The Genesee Valley Canal was commenced in 1836, and opened forty-one miles in November, 1841, since when the work has been suspended. The Black River Canal was also commenced in 1836, and nearly completed, but the work was suspended in 1841, before any part of it had been made navigable.

Want of space compels us to reserve for our next number further statements respecting the New York canals, which we had intended to present, as they are among the most important works of internal improvement in America; but in the meantime we give the following table. It will be observed that the tolls and trade on the canals, for the year 1844, greatly exceeded those of any former year; the increase in the amount of tolls over the year 1843, being $364,784. It is confidently anticipated, that the completion of the various canals and rail roads, connecting the valley of the Mississippi with the lakes, will cause a progressive increase of the tolls and trade for the future, notwithstanding the rival avenues to the Atlantic markets.

COMPARATIVE VIEW OF TRADE ON THE NEW YORK CANALS.

The total tonnage and value of all the property transported on the canals, ascending and descending, with the tons of produce, &c., arriving at tide-water, and the aggregate value of the same in market, for nine years, is as follows:

Year.	Tons ascending and descending.	Value.	Tons arriving at tide-water.	Value.
1836	1,310,817	$67,634,343	696,347	$26,932,470
1837	1,171,296	55,809,288	611,781	21,822,354
1838	1,333,011	65,746,559	640,481	23,038,510
1839	1,435,713	73,399,764	602,128	20,163,199
1840	1,416,046	66,303,892	669,012	23,213,573
1841	1,521,661	92,202,929	774,334	27,225,322
1842	1,236,931	60,016,608	666,626	22,751,013
1843	1,513,439	76,276,909	836,861	28,453,408
1844	1,816,586	92,750,874	1,014,094	34,183,167

Internal Trade on the Canals.

To ascertain the proportion of internal trade or traffic from place to place, on the Canals, we take the total number of tons coming to tide-water, and the number of tons going from tide-water; and deduct the amount of both from the total tonnage of property passing on the Canals. This internal, or interchange trade, we believe, has not been separately noticed by the Commissioners of the Canal Fund, in their annual reports.

The number of tons transported on the Canals in 1843, according to the above table, was		1,513,439
The number of tons coming to tide-water was	836,861	
And the number of tons going from tide-water	143,595	
Total number of tons arriving at, and sent from, tide-water		980,456
The balance shows the internal trade on the Canals to have been		532,983

On this basis we have constructed the following table of the comparative proportion of each branch of trade on the Canals.

Year.	Tons arriving at tide-water.	Tons going from tide-water.	Internal trade, Tons.	Trade. Total tons.
1837	611,781	122,130	437,385	1,171,296
1838	640,481	142,808	549,722	1,333,011
1839	602,128	148,485	691,550	1,435,713
1840	669,012	129,580	617,454	1,416,046
1841	774,334	162,715	584,612	1,521,661
1842	666,626	123,294	447,011	1,236,931
1843	836,851	143,595	532,983	1,513,439
1844	1,019,094	176,737	620,755	1,816,586

This statement shows that considerably more than one-third of the tonnage which passes on the Canals, is the internal trade. What proportion of the tolls on the Canals this tonnage pays, we cannot ascertain, as no account is kept of it distinct from the general trade, at the Canal offices. If, however, we estimate the tolls to average $1 per ton, which is less than the average toll paid on produce conveyed on the Canals, the proportion of tolls paid on the internal trade averages about $550,000 annually.

Amount of Tolls paid on all the Canals, on the total movement of articles, and upon Boats and Passengers.

	1843.	1845.	Annual average for last 8 years.
Boats and passengers,	$191,878	$156,004	$183,191
Products of the forest,	363,847	290,755	259,059
Agriculture,	1,009,773	922,710	706,312
Manufactures,	123,061	93,231	86,241
Merchandise,	585,147	542,617	488,854
Other articles,	172,968	116,233	99,031
Total,	$2,449,376	$2,081,590	$1,822,693

Total tons of each class of articles which arrived at tide-water on the Hudson River from the Erie and Champlain Canals in 1844.

	Erie Canal. tons.	Champlain Canal. tons.	Erie and Champlain. tons.
Products of the forests,	356,874	188,328	345,202
Agriculture,	371,326	7,388	378,714
Manufactures,	28,432	3,902	32,334
Merchandise,	236	9	245
Other articles,	42,948	19,651	62,599
Total,	799,816	219,278	1,019,094

Annual average of articles arriving at tide-water for two terms of five years each.

	Erie Canal.		Champlain Canal.	
	1835 to 1839. tons.	1840 to 1844. tons.	1833 to 1839. tons.	1840 to 1844. tons.
Products of the forest,	216,092	226,251	219,405	184,481
Agriculture,	161,629	311,713	6,641	6,412
Manufactures,	8,052	16,363	1,733	4,517
Merchandise,	846	136	44	42
Other articles,	35,378	28,586	10,964	14,704
Total,	421,997	583,029	238,788	210,156

The annual average of the total tons arriving at the Hudson River from the Erie Canal shows an average annual increase for the last five years of 160,132 tons, and an average annual diminution from the Champlain Canal of 28,582 tons.

REVIEW OF THE OLD WORLD.

We have received our foreign magazines and periodicals for the month of June of the present year, and we propose to give our readers a summary of their most valuable contents, so far as they relate to literature, science, and the fine arts. Indeed, it is our design to make this a characteristic feature of our magazine, and one by which it shall be distinguished in part from all our cotemporaries.

THE FINE ARTS.

Among the novelties recently introduced into Germany, and supposed to be a revival of a Roman method, is that of ivory casts, produced by the use of what is called ivory paste. M. Cauer, of Munich, is producing them with great success, and finds a ready sale for his groups and statuettes. Historical painting seems to have received a new impulse in that country, and we hear of splendid specimens by Palme, Taeger, and Schubert. An entire re-organization of the Berlin and Prussian Art Unions is contemplated. In Vienna, it is said, that the director of the Lithographer's Institution has invented a process of painting on stone, in a way to permit numerous impressions to be taken. In Rome, the English Drawing Academy have chosen Signor Minardi as a teacher, after a sharp debate and much contention. Bruni of Russia, Cornelius of Prussia, and Gibson of England, are employed upon works of great merit, and are the subjects of much attention at the present moment.

In England there is a constant succession of events connected with the fine arts. The celebrated illustrations of Shakspeare, by Kenney Meadows, are being republished in the Art Union. We think these have furnished hints to some of our own illustrators: The celebrated statue of "the Greek Slave," by our countryman Powers, is exhibiting in London. It is creating the greatest interest, and is the property of Mr. Grant, a gentleman of Devonshire. It competes successfully with the best remnants of Greek art.

Some improvements in the Calotype have taken place, through the instrumentality of M. Claudet. Likenesses are easily produced upon prepared paper, by the effect of light, which are afterwards "touched up," and become excellent portraits.

A celebrated gallery, calld the Napoleon Gallery, was to have been sold in London on the 23d of June. Among the curious relics of the Emperor we find the following, and as some of them may be properly classed under the head artistical, we will name them.

Among the remarkable historical illustrations, are:

Autograph memoranda, filling both sides of a card, made by Napoleon when attending lectures on Mineralogy, previous to the siege of Toulon, in 1793.

Napoleon's signature *with* the U (Buonaparte), and also *without* the U (Bonaparte). Both the letters to which these signatures are attached are dated on the *same day;* as the one *with* the U is dated (in Napoleon's own writing) four hours after the one without the U; and as no signature has, since that time (March 1, 1796), ever been found *with* the U, it is presumed that Napoleon, at this period, altered the manner of spelling his name (in order to shorten his signature and make it appear better French); and that these two autographs are the *last* he ever wrote with the U, and the *first* without it. These papers are of great historical interest.

A bust, life size, of Napoleon, in needlework, worked in silk and gold by the Empress Josephine and her daughter, the Queen Hortense (of Holland).

Five promotion swords, presented by Napoleon on the field of battle.

An estimate by his architect, Fontaine, for fitting up the Church of Notre Dame, on the occasion of the Emperor's birthday, August, 1807; on which Napoleon has written his own remarks, altering and reducing the account from 22,750 francs to 4,750. This is an interesting document.

The silk cordon of the Legion of Honour worn by the Emperor, and sent by him to his son at Vienna during the One Hundred Days; this was worn by the Duke of Reichstadt nearly up to the day of his death.

The bottle from which the Emperor poured his wine when breakfasting at Phillipeville (the morning after the battle at Waterloo), June 19, 1815, presented by Colonel Coutan, the English interpreter to the Emperor Napoleon.

Several sheets of writing paper, taken from Napoleon's carriage after the battle at Waterloo; the water mark is a bust of the Emperor, and the imperial eagle.

The spatula used by Napoleon to clean his spade when gardening at St. Helena.

A card, with several common-place phrases in French, and the English translation of them, both written by the Emperor Napoleon at St. Helena; said by his private Secretary to be the first and only occasion of his ever writing English.

A small sarcophagus, in pure gold, containing a whole-length figure of Napoleon; a vase on the top with his *hair*. This unique work of art was the property of Madame Bertrand, and is inscribed with the Emperor's last words, "*Mon Fils,*" "*Tete d'Armee France.*"—St. Hélené, 5 Mai, 1821.

The British Museum continues to be a favourite with the British public. Its receipts the last year were about £43,000, and the expenditures £37,000, and a little more. Among the recent additions we notice the coins of the Duke of Devonshire, a collection of fossils for which £1,000 were paid, sculptures from Xanthus, several Syriac MSS., 15,500 books, 1,228 musical works, and several rare old editions of the Bible. Indeed, in all its departments it has been greatly enriched. All the literary institutions of England appear to be in a prosperous condition.

SCIENTIFIC.

We notice in the Edinburgh Philosophical Journal, an elaborate article on the Tithonic rays, by Professor Draper, of New York, and an essay on Sillimanite, an American mineral, by Dr. Thompson, of Glasgow. A theory of Professor Henry, of Princeton, on the cohesion of liquids, is republished in the same number.

A curious article called gold detergent has come into use abroad, which, in the shape of a liquid, when applied to tarnished gold frames, restores to them their original lustre.

ANASTATIC PRINTING.

Professor Faraday has been turning his attention to the art of Anastatic printing, which bids fair to become a very great auxiliary to science and the fine arts. Numerous claimants for the honour of the invention have sprung up, both in England and this country. A Mr. Cocks claims to have known it in 1836, and says he can take copies from any engraving in thirty minutes, so that they cannot be possibly distinguished from the original. Professor Faraday, with his usual skill and perspicuity, explains the principle. The word Anastatic is from the Greek *Anastasis*, meaning "the fresh raising up," and the art rests entirely upon the application of a few known properties of the articles employed.

"Water attracts water, and oil oil, though each repels the other. Metals are more easily wet with oil than with water, but they will readily be moistened by a weak solution of gum, and finally this property of their becoming wet with water is greatly increased by phosphatic acid. Another principle is the readiness with which part of the ink of any newly printed book or engraving may be transferred, by pressure, to any smooth surface beneath. The process is simple. The printed paper, whether letter press or engraving, is first moistened with dilute nitric acid, and then pressed with considerable force by a roller on a clean piece of zinc, and every part of the paper thus brought in contact with it. The acid with which the unprinted part of the paper is saturated, *etches* the metal, and the printed portion "sets off" upon it or is transferred, precisely as a damp newspaper will leave a reverse impression of the words on a clean sheet. The zinc plate thus prepared is washed with a solution of gum, in weak phosphatic acid. This liquid is attracted by the etched surface, which it freely wets while it is repelled by the oil of the ink in which the printing or drawing on the plate is made. A leathern roller, covered with ink, is then passed over the plate, when a converse effect ensues. The repulsion between the oil, ink, and the watery surface over which the roller passes, prevents any soiling of the unfigured parts of the zinc plate, while the attraction between oil and oil causes the ink to be distributed over the *printed* portions. The impressions from the Anastatic plate, are taken from it after the common lithographic process. Old books which do not set off their ink, are treated in a little different manner at the outset. We have seen specimens of this printing which are really beautiful." Many persons have been trying experiments with it in this city, without succeeding to their wishes. We have here shown them how simple the process is, and we now see no difficulty whatever in republishing exact copies of the most beautiful English works at a trifling expense, instead of printing them in the small type or on the wretched paper in which we are now compelled to take them.

MISCELLANEOUS.

The Earl of Dundonald's steam sloop Janus, propelled, or rather attempted to be propelled, by rotary engines of his own contrivance, has proved a dead failure, after an expenditure of $160,000. We observe that in the British steam navy, boilers with tubular flues are now generally adopted.

In natural history we observe many novelties, such as a century of new genera and species of orchidaceous plants, six new species of the insect Apion, and many other varieties, which would not be interesting to the general reader.

We perceive, in the Nautical Magazine, a valuable article on the subject of ice in the North Atlantic, by W. C. Redfield, Esq., a savan of our own city.

A patent has been taken out in England for the preservation of the potato in all climates, the complete success of which in its objects has been certified to by Dr. Ure. It is packed in hundred weight metal cases, three feet by two, containing each five cwt. of concentrated potato, and the cost is but one penny a pound. Dr. Ure speaks highly of the nutricious character of the article, and his opinions are sustained by such men as Professor Daniell, Brande, and Dr. Paris, the author of the famous treatise on diet. We should like to see the attention of the American Institute turned to this important subject.

Arago, who has just married an actress, is still a profound philosopher. He calculates the rapidity of transmission by the electrical telegraph at 32,000 leagues per hour, forming his opinion upon actual experiment.

At a recent meeting of the Royal Institution, the philosophy of vegetation as it is aided by electricity, was admirably treated by the Rev. Mr. Sidney. We may recur to this again.

LITERARY.

A new tale by Frederica Bremer is announced, called Life in Dalecarlia, translated by William Howitt. Also the following works of interest:—

Memoirs of The Young Pretender, by C. L. Klose, and of Sophia Dorothea, consort of George I. Capt. Chamier has an historical romance in the press, called Konigsmark.

In Tait's Edinburgh Magazine is a favourable notice of the poetry of Mr. Cornelius Mathews, of this city. Mr. Gilroy's Art of Weaving, a large volume brought out in this city, is not treated with so much consideration. A Letter on Slavery in the United States, has made its appearance in England, addressed to Daniel Webster, by a Mr. Sampson, but with what weapon he assails the evil is not mentioned.

Mrs. Loudon, the intelligent widow of the famous botanist and landscape gardener, is writing some excellent essays on public education in the Metropolitan.

An edition of Shakspeare's Taming the Shrew has lately been found, bearing the date of 1607. The Hon. Henry Keppel is preparing a Narrative of the Expedition to Borneo in 1833, and Mr. Carlyle has in press a life of Schiller.

An anonymous novel, called "Maids of Honour," a tale of the Court of George the 1st, is announced by Colburn.

Robert Sym, an uncle of Professor Wilson, and author of the articles in Blackwood signed "Timothy Tickler," died recently at Edinburgh.

Guizot, whose health is not quite re-established, was recently found by a friend reading Thier's History of the Consulate. "You see," said he, "I am quite well, and reading *romances*."

A gentleman in Paris has bought out the advertising columns of the Constitutionnel, Des Debats, and the Presse, for fifteen years, at £36,000. He has divided this property into 8,000 shares, at £10 each, and they have actually risen to £14. A curious literary speculation indeed.

The travels of Lyell, the Geologist, in North America, have appeared in London.

A very important work by Mr. Neison, is published, on the subject of "Vital Statistics," having direct reference to the operations of life insurance companies.

The author of the Jilt has published a new novel, called the Breach of Promise, and the author of Granby has written another, called The College Chums.

The death of the great dramatic critic, Augustus William Von Schlegel, has been announced. His critical knowledge extended itself to English literature, and his remarks on Shakspeare are truly profound and elegant.

A Neapolitan writer, Cesare Cantu, is making a sensation in Italy by his beautiful tales founded on the history of his country. Another Italian writer, Dalbono, is pursuing the same career with success; and Tarantini, an advocate and poet, has published a very elegant volume styled collectively, "L'Eco di Mergellina." A new opera by Mercadante, produced at St. Carlo, and another by Pacini, Lorenzo di Medici, are highly spoken of by the critics.

Lady Clark, the only sister of Lady Morgan, died at Dublin a few weeks since. She was the author of a comedy called "The Irish Woman," and several amusing papers in the magazines.

An autobiography of Blanco White, edited by Mr. Thorn, has made its appearance. His life and opinions are worth examination, and they are said to be illustrated by this formula, which directed him through all his religious changes:—"Christianity is truth; my opinions are truth, therefore *they* are Christianity"

We find on the London bookseller's catalogues a large number of new publications announced, which want of time and space will not permit us to enumerate.

NOTICES OF NEW BOOKS.

Rural Economy, in its relations with Chemistry, Physics and Meteorology; or, Chemistry applied to Agriculture. By J. Boussengault, member of the Institute of France. Translated, with an Introduction and Notes, by George Law. New York: D. Appleton & Co., 200 Broadway; Philadelphia: George S. Appleton, 148 Chesnut street:

This book, under the modest title of Rural Economy, is a very full treatise upon what may be appropriately called the theory and practice of agriculture. Since this art—for it begins now to assume all the importance of one of the higher order of arts—since it has thus been brought forward there have been many treatises written upon it, and we have seen several, but none, we think, so full and complete as Boussengault's, in its systematic arrangements of its subjects, and the easy and clear style in which they are treated. Commencing with the chemical phenomena of the vegetation of plants, he proceeds, in the second section, to treat fully upon their germination. In the third, he examines their evolution and growth, giving five experiments on the growth of red clover, peas, wheat and oats, with the results of the analyses, showing the proportions of carbon, hydrogen, oxygen and azote in each. The fourth is principally upon the inorganic matter contained in plants. Chapter second, under many heads, treats of the chemical constitution of vegetable substances. Chapter third, an examination of the saccharine fruits, juices and infusions used in the preparation of fermented and distilled liquors. Chapter four, on soils. Chapter five, on the various manures from excretions. Chapter six, on mineral manures. Chapter seven, on rotation of crops, residues of different crops, and the inorganic substances of manures and crops. Chapter eight, on the feeding of animals belonging to a farm, and on the immediate principles of animal origin. Chapter nine, on the economy of the animals on a farm, of stock in general, and its relations with the production of manure. Chapter ten, and last, is on meteorological considerations. Each of these subjects is treated of under many heads, and very copiously. The book contains upwards of five hundred pages, and we cannot better describe them, than in the language used in the editor's introduction:—"Nothing from the pen of the editor could throw additional light upon the author's brilliant and most interesting elucidation of vegetable physiology; his exposition is most masterly and complete, and contains much that is most valuable and new. The chemical part is of inestimable value, and conducted with consummate skill and knowledge, and with a minuteness and accuracy perfectly unexampled. At page 237 the subject of manures is taken up and discussed with characteristic minuteness. The editor is anxious to direct special attention to the seventh chapter, treating of organic and inorganic manures. The interesting and ample instruction conveyed in the observations of this acute and profound observer upon the food and alimentary treatment of cattle of every species, accompanied as they are by minute details of the results obtained, &c., are warmly recommended."

In conclusion, we feel assured we cannot confer a higher favour upon our agricultural readers than to recommend this book as one every way calculated to give them the most correct theory and the best practice with which modern science has enriched the study of agriculture.

The American Poulterers' Companion: a practical treatise on the breeding, rearing and general management of the various species of domestic poultry, with illustrations and portraits of fowls, taken from domestic life. By C. N. Bement; third edition. New York: Saxton & Miles, 205 Broadway. Philadelphia: James M. Campbell. Boston: Saxton & Kelt. 1845.

This is really what it professes to be, *a practical treatise*, and we take great pleasure in recommending it as full of useful information. It is embellished with many handsome wood cuts, with particular descriptions, ground plans and elevations of poultry houses of the most modern and approved construction, while the likenesses of the various species of poultry spoken of in the title are spirited and characteristic. Mr. Bement deserves the thanks of his fellow citizens for the information it contains, in every branch of the subject on which it treats. He has made it interesting even to those who seek general information, without the intention to use it for profit; to the latter, however, it will doubtless prove a very valuable acquisition.

The Chemical and Physiological Balance of Organic Nature: an essay. By M. J. Dumas, and M. J. B. Boussengault, member of the Institute of France. Edited by D. P. Gardner, M. D. Lecturer on Agricultural Chemistry; from the third edition, with new documents. New York: Saxton & Miles, 205 Broadway. Boston: Saxton, Peirce & Co. 1844.

The valuable information contained in this work, should not be wanting to any person who would acquire, in the shortest possible time, and the clearest mode of imparting it, a knowledge of the chemical properties of vegetable and animal matter. What the learned authors of this treatise mean to convey by the word *balance*, as expressed in their own words, is that "if animals incessantly produce carbonic acid, water, azote and oxide of amonium, vegetables consequently consume, without cessation, oxide of amonium, azote, water and carbonic acid; what the one gives to the atmosphere, that the other takes from it; and they deduce from this, that so far as these truly organic elements are concerned, plants and animals are the offspring of the air." The whole treatise is highly scientific and interesting, as would certainly be anticipated from the names of the learned authors, Dumas and Boussengault,

A system of Latin Versification in a series of progressive exercises, including specimens of translation from English and German Poetry into Latin verse, for the use of Schools and Colleges, by Charles Anthon, L.L.D., Professor of the Greek and Latin Languages in Columbia College. New York: Harper & Brothers. 1845.

This work is intended as a sequel to the treatise on Latin prosody published a few years ago by the same accomplished scholar; and like all his classical productions, is remarkable for the manner in which he condenses the information contained in numerous works into one volume of a manual, or text book, so as to give great advantage to the American student over his cotemporaries on the other side of the Atlantic. To such of our collegiates as would acquire a knowledge of the mode of renderin other languages into Latin verse, this text book will prove invaluable.

Etherology, or the Philosophy of Mesmerism and Phrenology, including a New Philosophy of Sleep and Consciousness, with a view of the pretensions of Neurology and Phreno-Magnetism. By J. Stanly Grimes, Counseller at Law, President of the Western Phrenological Society, Professor of Medical Jurisprudence in the Castleton Medical College, and author of a "New System of Phrenology." New York: SAXTON & MILES. Philadelphia: JAMES W. CAMPBELL. Boston: SAXTON, PEIRCE & Co. 1845.

This is a very curious book. The author is evidently a man of genius, and as in all that relates to Mesmerism and Phrenology, there is yet doubt and uncertainty; it is the very study of all others in which genius delights to revel. Mr. Grimes has indulged himself in no small degree, and yet with great system. Starting with the proposition, that "all the known phenomena of the universe may be referred to three general principles, viz: matter, motion, and consciousness, and that consequently all that we know is a modification of some one or all of these," he proceeds upon the inductive system to state his facts; and he reasons from them logically, that there is one infinitely subtile fluid pervading all space, which he calls "Etherium," and which constitutes the medium of communication between the mesmeriser, and the party upon whom he operates. The whole subject is copiously examined, from the time of Mesmer to the present moment, including the reports of the two committees of the French Institute, the Rev. Mr. Townsend's book, and a variety of other testimonies. His system of phrenology, harmonizes with his doctrine of Ethereuism. We have been much pleased with a careful perusal of this work, which, to say the least of it, is remarkable for the clearness and ability with which it is written.

Plato Contra Atheos. Plato against the Atheists, or the Tenth Book of the Dialogue on Laws, accompanied with Critical Notes and followed by extended dissertations on some of the main points of the Platonic Philosophy and Theology, especially as compared with the Holy Scriptures. By Taylor Lewis, L. L. D., Professor of the Greek Language and Literature in the University of New York. New York: HARPER & BROTHERS. 1845.

The first 84 pages of this work contain the Greek text and critical notes. From page 87 to 373, the end of the work, consists of extended notes and learned dissertations on Physicotheology, with the views of Plato, on various points connected with that subject, and with Atheism. With critical examinations into the meaning of many Greek words and terms. The whole book evinces much learning and research, and though to comprehend the whole text, requires a correct knowledge of the Greek language; yet there are many beautiful passages in the notes and dissertations, which are principally in English.

The American Agriculturist; designed to improve the farmer, the stock breeder, and the horticulturist. Vol. III. Published by SAXTON & MILES, 205 Broadway.

This is a monthly journal. Volume 3d commences in January and ends in December, 1844; it is edited by A. B. Allen. It is embellished with wood cuts throughout, while each number contains at its head, the representation of an agricultural scene, with the motto from the writings of Washington that "Agriculture is the most healthful, the most useful, and the most noble employment of man." The contents of this volume are pleasingly varied, being both descriptive and practical. There is a copious index alphabetically arranged, and in looking it over, and glancing at the contents we find few subjects of interest to those concerned in rural pursuits that have not claimed the attention of the editor, who appears to have availed himself largely of the increased and increasing knowledge which modern science is so liberally bestowing upon rural economy.

Travels in the Interior of North America, in the years 1832, 1833, and 1834, by Maximillian, Prince of Weid, in one volume, royal quarto, accompanied by eighty-one elaborated coloured plates, imperial folio, numerous engravings on wood, and a large Map; the text translated from the German by H. Evans Lloyd. London: ACKERMAN & Co., and WILLIAM COLMAN, No. 203 Broadway, New York.

This splendid work now offered to the American public, is really a gem—the engravings each separately finished, resemble fine paintings, and are full of spirit and highly characteristic.

The Prince landed at Boston, in July 1832, visited New York, Philadelphia, and many places in Pennsylvania; crossed the Alleghany mountains to Pittsburg, thence to Wheeling, and down the Ohio to Mount Vernon and New Harmony on the Wabash, where he wintered. In the spring of 1833, he went down the Ohio to the Mississippi, thence to St. Louis, from St. Louis he ascended the Missouri 2500 miles to Fort McKenzie, near the falls of Missouri and the Rocky Mountains. He returned down the

Missouri to Fort Clark near the Mandan Villages, where he passed the second winter. In the spring of 1834, he went down the Missouri to St. Louis, down the Mississippi to the mouth of the Ohio, up that river to Mount Vernon, thence by a new route through Indiana; next by Canal to Lake Erie to Buffalo and the falls of Niagara, (of which there is a splendid engraving;) thence by Canal to the Hudson and down to New York; thus completing in two years a journey of ten thousand English miles. Every public library in the United States, should possess a copy of this work, for it is really unique.

The Industrial Resources of Ireland: by Robert Kane, M. D., honorary member of the Royal Dublin Society, and of the Flax Improvement Society of Ireland; Secretary to the Council of the Royal Irish Academy; Professor of Natural Philosophy to the Royal Dublin Society: and of Chemistry to the Apothecaries' Hall, of Ireland. Dublin. 1845. Second Edition.

This work is the only one we have seen, that goes fully into a description of the present state of industry in Ireland, which is given at large, in all its varieties of Agriculture, Mining and Manufactures. We have already in an article (for our next number) on Wool and Woollens, given an extract from it, and shall continue to draw upon it, for further elucidations of what is now going on in that oppressed, but really interesting portion of the British Empire.

The Library of Commerce, practical, theoretical, and historical. By Freeman Hunt, editor of the Merchants' Magazine. Volume 1. New York: 142 Fulton street.

This is an interesting work. This volume contains a sketch of the commercial intercourse of the world with China. History of the British corn laws, by J. C. Platt, with additions by the American editor. Memoirs of commercial delusions: embracing historical sketches of the Mississippi scheme, and the South Sea bubble, by Charles Mackay, Esq. The history of the corn laws is peculiarly interesting to us, inasmuch as it contains many tables which show how much lower the price of grain is in the Baltic and Mediterranean ports than with us—at how much less freight it can be sent thence to England; and, we think, fully establishes the position, that were the corn laws repealed to-morrow, no increased export of the farinaceous productions would take place from the United States. But we do not wish to forestal public opinion, and recommend the perusal of this work to all who are desirous of obtaining information on a subject so important to our agriculturists, who, by a careful examination into the British corn trade, will be the better enabled to estimate the value of the market furnished at home by our manufacturers.

The Chemistry of Vegetable and Animal Physiology. By Dr. G. J. Mulder, Prof. of Chemistry in the University of Utrecht. Translated from the Dutch, by P. F. H. Thornley, First Assistant in the Laboratory of the Agricultural Chemical Association of Scotland; with an Introduction, by Professor I. L. W. Johnston, F. R. SS. L. and E. First authorized American edition. With notes by B. Silliman, Jun. Part I. Containing Nos. 1 *and* 2. *Price* 50 *cents.* Wiley & Putnam. 1845.

This is another of those useful publications, treating, as it professes, in an able manner, of the structure of animal and vegetable substances, and their action upon each other. Particular attention is now being given to these very important subjects, by men of science throughout Europe and this country, and they cannot be too strongly recommended to all persons whose business or pleasure lead them to the study of those arts, which undoubtedly aid nature in her fructifying processes. We shall be much disappointed, if great improvement in agriculture and the arts is not soon the result of a careful examination of such books as the one now under notice.

Wiley & Putnam's Library of American Books.

We are much pleased to see a series of books of this nature in progress of dissemination, for there is surely no mode better calculated to encourage our infant literature. We observe that No. 1 contains the journal of an African cruiser; No. 2, tales of Edgar A. Poe; and No. 3, Letters from Italy, by J. T. Headley. No better proof is required than these three titles, of the encouragement given to our young men to treasure up and impart the knowledge acquired by foreign travel and reflection. We have neither time nor space for an extended notice of these several volumes, but from what we have read of them, we can conscientiously recommend them to general favour; as well as for the reasons already stated.

END OF NO. II.

THE

NATIONAL MAGAZINE

AND

Industrial Record.

Vol. I. NEW YORK, AUGUST, 1845. No. III.

HISTORICAL SKETCH

OF

THE WOOLLEN MANUFACTURE,

FROM THE EARLIEST PERIOD TO THE PRESENT TIME.

No doubt exists that the textile manufactures were known to the Egyptians. Weaving was an important branch of industry. Cotton and flax being indigenous, it is said the stuffs made from them were woven in large manufactories under the superintendence of the priests, who had a monopoly of all the cloths used for sacred purposes, especially for the mummies. These stuffs were generally dyed in the raw material, and many of them embroidered with threads of gold and silver. Some of them are striped, some stained, or flowered, and the colours of all exhibit, even at this day, those dazzling hues of the East, which have been in vain attempted in Europe. But we have no positive accounts of *woollen* fabrics in Egypt.

We are told that weaving of cotton, woollen stuffs, and carpets, were among the principal manufactures established in Babylon.

The textile fabrics of the Sidonians, and the purple cloths of the Syrians, were celebrated from the earliest antiquity. The Tyrian purple was not a single colour, but it was a generic name for all the shades of purple and scarlet. The dye was obtained from a shell fish, found in great abundance on the shores of the Mediterranean. Vegetable dyes, of great beauty and variety, were also used; and the Phœnicians are said alone to have understood the art of producing what are called shot colours, by weaving threads of different tints.

The arts of spinning and weaving threads of wool, doubtless came from the East; they are alluded to, by Moses, as existing nearly 1500 years before the Christian era, and we have from him, abundant testimony that the early patriarchs had numerous flocks of sheep.

Doubtless these arts were known to the Greeks, who usually attributed the introduction of all arts to their gods, and to Minerva is ascribed the invention of spinning and weaving.

At what particular period wool was first spun and woven, we have no further means of ascertaining. "Pliny" relates that Nicias of Megara discovered the art of fulling cloth. The property which wool possesses of felting was known at a much earlier period; hence arises the supposition that the first cloths made of wool were not woven, but felted like hats. The tents of the Arabs, even at the present day, are all thus made.

Mr. Lucock, in his treatise on wool, judiciously remarks, that "when the skins of sheep dressed with the wool on, served as clothing, it is obvious that only one useful fleece could be obtained from any one animal."

The earliest mode of spinning, of which any account has been preserved, is very simple. It is performed by means of a rod or staff, about which the wool to be spun is carefully wrapped, and held in the left hand, while a rough kind of spindle quickly twirled between the left hand and the thigh, is suffered to continue its motion when suspended by the thread, which the artist gradually lengthened with his fingers. This least complex kind of spinning is not entirely discontinued. A few years since it might have been seen in use in the county of Norfolk, in England.

We have little information of the woollen manufactures of the Greeks and Romans, but among the latter, large establishments must have been necessary for the clothing of distant armies. That the Romans had carried the manufacture of fine woollen cloths to a high degree of perfection, is proved by a variety of circumstances; and particularly by the great attention paid by them to the cultivation of fine woolled sheep, and by the high prices at which the wool and sheep were sold, as appears from the writings of Pliny, Varro, and Columella. Pliny describes two kinds of sheep, one which grew coarse long wool, the other with very soft and fine wool; and the description which he gives of the latter, agrees well with the present race of Merino sheep. Strabo, who flourished in the reign of Augustus, says that in "Zurditania," in Portugal, then a part of Spain, "they formerly imported many garments, but that now their wool was better than that of the Coraxi, and so beautiful, that a ram for the purpose of breeding was sold for a talent, (equal to £216 of English money,) and that fabrics of the finest texture were made of this wool." All ranks of people among the Romans wore woollen garments. Pliny informs us that, in his time, no wool was sold higher than at one hundred "sestertie" the pound, equal to £1 2*s*. English. From their intercourse with the East, the Romans would become acquainted with the shawl cloths of India, and most probably imitated that beautiful and delicate fabric: these shawls are made from very short fine wool, and not from combed wool, as has generally been supposed. It is thought we now know no perfection in the finest cloth making that was not known in the time of Alexander the Great; and if these eastern shawl cloths were successfully imitated by the Greeks and Romans, as was probably the case, we may form some idea of the perfection to which they had arrived in this delicate art. The overrunning of the Roman territories by the barbarians of the North, destroyed all their establishments, and the refinements of this art were lost; but the art of producing from wool a warm and substantial clothing was undoubtedly preserved.

In Flanders it commenced about the tenth century, and it was certainly known in England in the twelfth, for in Selden's "England's Epimonis," it is provided that whereever woollen broadcloth is made, it shall be all of one breadth, viz: two ells within the lists; a plain proof, says "Anderson," that broadcloth was made in England in the reign of Richard I., about the year 1197.

In the records of the Exchequer for the first year of Edward I., (1283,) a notice occurs of some cloth of Ireland having been stolen at Winchester in the preceding reign, along with some cloth of Abingdon, and some cloth of London, called burrel. At this time, says McPherson, "the stuffs called 'sayes,' made in Ireland, were in such request, that they were imitated by the manufacturers of Catalonia, who were in the practice of making the finest woollen goods of every kind; they were also much esteemed in Italy, and were worn by the ladies in Florence, a city then abounding with the richest manufactures, and in which the luxury of dress was carried to the greatest height."

Bischoff, the author of an excellent work on wool and woollens, published in London in 1842, says: "It has been a common opinion that the woollen manufacture took its rise in Great Britain with the persecutions in the Netherlands, when the Flemish manufacturers, driven from their native country by the cruelty of the Duke of Alva, in the latter part of the sixteenth century, found an asylum, with protection and encouragement, in England; and that it was greatly extended by the Protestant refugees from France, on the revocation of the edict of Nantz in 1685. There is no doubt that these accessions of skilful manufacturers gave a great impulse to the woollen trade, though much more to the silk manufacture; but it is on record, that the woollen branch flourished some centuries earlier, in many parts of Great Britain and Ireland.

"There is even reason to believe that the more civilized Britons were clothed in woollen fabrics at the time of the Roman conquest; for Cæsar observes, that the distant and less civilized Britons were clothed in skins: from which it may be inferred, that the nearer and more civilized had clothing of a better and more comfortable kind, and that could scarcely be any other than woollen cloth. So early as the commencement of the sixth century, the common article of dress in Great Britain and Ireland, was a cloak or plaid (peplum peleum sagum) adorned with a variety of colours, which was probably of home manufacture. This, however, is conjecture only; the first authentic record of the woollen manufacture, states that it was established by the Flemings in the reign of William the Conqueror and Henry I., when a vast number were obliged to quit their own country by an encroachment of the sea, and came to England in the year eleven hundred and eleven, hoping for settlement and protection from the influence of the Queen, who was from their own country. William, glad of such an accession of foreigners, stationed a great number of them upon the northern frontiers, chiefly about Carlisle, and others throughout the rest of the country. King Henry, finding that the Flemings did not well agree with his other subjects, transplanted the whole of them to a district taken from the Welsh, called Ros, now a part of Pembrookshire. They were a brave, hardy people, equally qualified to handle the plough and the sword, and they were also skilful in the woollen manufacture, the great staple of their country; so that in every respect they were a most valuable colony, whether considered as a barrier against the enemy, or the first founders of the manufacture of fine woollens in England.

Henry II. ordered a fair for the clothiers and dressers to be held in the churchyard of Bartholomew Priory, near Smithfield, for three days, which spot still retains the name of "cloth fair." It appears also, that towards the end of the reign of that King, the woollen manufacture was widely extended over the whole kingdom; for besides the colony of Flemish weavers in Wales, who were probably the instructors of the rest, and the company or guild of weavers established in London, it seems there were similar companies of the same trade in Oxford, York, Nottingham, Huntingdon, Lincoln, and Winchester; and all of them, agreeably to the policy of the age, paid fines to the King for the privilege of carrying on their manufactures exclusive of all other towns. But there were dealers in Beverly, and other towns of Yorkshire, in Norwich, Huntingdon, Northampton, Gloucester, Nottingham, Newcastle-upon-Tyne, Lincoln, Stamford, Grimsby, Barton, St. Albans, Baldock, Kirkhamstead, and Chesterfield, who paid fines to the King, that they might freely buy and sell *dyed* cloth; some of these licenses also contained a permission to sell cloth of any width whatever. Henry II., in the thirty-first year of his reign, gave the weavers in London a confirmation of their guild, with all the freedom they enjoyed in the reign of Henry I., and in the patent directed that if any weaver mixed Spanish wool with English, in making cloth, the chief magistrate of London should burn it. Sir Matthew Hale says, in the reign of Henry II. this island greatly flourished in the manufacture of woollen cloths, but by the troublesome wars in the times of King John, Henry III., Edward I., and Edward II., this manufacture was wholly lost, and all our trade ran out in wool, woolfels, and leather.

Edward III. revived it, and it continued advancing during the reigns of Richard II., and Henry IV. A law was passed, 12th Rich. II. c. 14, in which it was enacted, that striped cloths made in Bristol and the counties round it, should be agreeable to the law of 1373, in length and breadth. This law shows that the country round Bristol, was then, as it ever since has continued to be, a chief seat of the clothing trade. Corry, in his history of Bristol, gives a curious account, extracted from Fuller's church history. After this reign it again declined exceedingly, and did not thoroughly revive till the reigns of Edward VI. and Elizabeth.

But it is not contended that the manufacture of woollen cloth was seriously undertaken in England till the year 1331, "in the reign of Edward III., who," say the English writers of that period, "invited over John Kemp from Flanders, and granted him a letter of protection for himself, with all his servants, apprentices, goods and chattels, and promising the same to all others of his occupation, and also to dyers and fullers who shall incline to come and settle in England. Accordingly seventy families of Walloons were this year brought over to England by King Edward's invitation for promoting the woollen manufacture, and teaching it to our people." This laid the foundation of the woollen manufacture in England.

In 1337, the exportation of wool from England was forbidden by act of Parliament. The price at that time in England is stated to have been about five pence three farthings per pound. Many statutes were passed, from time to time, to prevent its exportation; still it was smuggled into France, and according to the English writers, from that time, and for a long period afterwards, say till 1696, the French cloth manufactures were supported by the wool thus unlawfully exported from England. Most of the writers asserting that France managed to get about 500,000 sacks out of about 800,000 that were grown in England.

The various statutes that were, from time to time, passed for the encouragement of the woollen manufacture in England, would fill a large volume.

The exportation of wool was strictly forbidden for more than two centuries, and statute after statute enacted more rigidly to enforce the prohibition.

Wool and woollens, the produce of Ireland, and the wool of the colonies of England, could only be shipped to the mother country. No measure appears to have been omitted that would confine this manufacture as much as possible to England, while every scheme that could be devised was resorted to, to prevent France from becoming a rival in the art of making woollen cloth. What is very remarkable is, that up to the year 1667, woollen cloth was all made *white* in England, and sent to Holland to be dyed.

In that year, says Anderson, "one Brewer, from the Netherlands, came over to England with his servants, and had due encouragement from the crown for instructing our people in the dying and dressing of our cloths, which were consequently brought to the greatest perfection before their exportation." It appears that in 1603, Sir Walter Raleigh had stated to the King that there were eight thousand pieces of undressed cloth annually exported from England, whereby four hundred thousand pounds per annum for fifty-five years past, being above twenty millions, had been lost to the nation, which sum, had the said cloths been dressed and dyed at home, would have been gained, beside the further enlarging of traffic by importing materials for dying, and the increase of customs thereon. Moreover there had been exported at that time in baizes and Devonshire kersies, all white, about fifty thousand pieces, whereby five millions more had been lost, for want of dying and dressing in England.

In the year 1712, Dr. Davenant reports that there were exported from England in woollen manufactures to the amount of £2,932,292, being above two-fifths of their whole exports at that period.

About this time it was estimated that the wool shorn in England, amounted in value to - - - - - - - - - -	£2,000,000
The manufacturing whereof was computed to cost - -	6,000,000
Total value when manufactured - - - - - - . -	£8,000,000

And it is further said that nearly one-half was exported, more especially from the increased demand, for the American colonies.

There is reason to believe the woollen manufacture not less ancient in France than in England. From M. Thiel, we learn that the woollen and linen trade first commenced in France about the year 960. M. Savary mentions a tradition of certain cloth workers at Paris having first taught the English the art: he is positive they have statutes on that head from the year 1188. In 1511, the French sent into the low countries cloth to an equal value with what was sold there from both Scotland and England put together; and a flight of female refugees in the reign of Queen Elizabeth took to England their art of making woollen stuffs; and before the Dutch and English gained the Levant trade in woollens, the French and Venetians had it. Before the year 1603, we read of woollen manufactures in France from Spanish wool; and the actual state at that time of Holland, England, and France respectively, in woollen manufacture, was as follows: the former bore the palm for superfine cloths of Spanish wool; England traded largely in middling and coarser kerseys, serges, baizes, and many other species of what was then called the new drapery, besides stockings; France, as said by a pupil of Colbert, a French writer, in 1664, furnished stuffs, for all Europe.

What then do we perceive to have been the principal objects of French policy at this juncture, in regard to woollen manufactures? That of making the French cloths for their own use, in order to save so much money in the balance of trade, as they had been wont to expend with the Spanish and Dutch in that costly article.

The material of wool for this purpose, so far as needed in France, they were under the necessity of getting from Spain: the art they could learn best from Holland, certainly not from England, where it was then in a very infant condition, by no means arrived to that state of perfection which it attained before the end of the seventeenth century; and which has since that time both increased and improved.

The French having succeeded in this attempt, revived their manufactures, proper for the Levant trade; and lastly they erected manufactures of stuffs, after the fashion of England, for the commerce with Spain.

In 1646, Nicholas Cadeau, a native of France, with John Benett and Mr. Ives, of Marseilles, had letters patent for twenty years for the sole making of cloths at Sedan, like those of Holland; the success of which manufacture exceeded all expectation; the wool made use of being Spanish, of the better sorts. In 1699, Sieur Vaurobais, a Dutchman, had also a patent for making fine cloths at Abbeville, in Picardy, after the fashion of Spain and Holland; his workmen to be brought from the latter country, his wool the best, from Spain only; which succeeded even better than that of Sieur Cadeau, at Sedan. Towards the end of the seventeenth century the Sieur Masseau set up a manufactory of cloths, after the fashion of England and Holland, in Caen, in Normandy, with Spanish wool only. The Sieur de Varrennes having imported workmen from Holland, undertook to make cloths for the Levant trade at Saptes, near Carcasonne, in Languedoc; this manufactory, called a royal one, was the model and the mother of all the rest of that kind; in particular that of Clermont Lodeve, which followed soon after. The Sieur Cathenier succeeded in the same way, no less than those before mentioned. The states of Languedoc added two others, one at Rieux, under the care of Sieur Gurse, a Dutchman; the other at Penzenas, under the direction of French manufacturers. Thus far appears no English names nor any signs of English wool. The last royal manufactory in Languedoc, mentioned by M. Savary, is that of M. Camberlin, who, by his name, might possibly be an

Englishman, or from English extraction; he did not make for the Levant, only woollen stuffs, after the fashion of England, for the Spanish trade; yet was it never contended, except by M. Postlethwait, that any English or Irish wool was imported into Languedoc; on the contrary, the wool used there is partly of the country, but principally brought from Marseilles; and that imported from Constantinople, Panorme, Smyrna, Alexandria, Cyprus, Cavalla, Salonica, Tunis, Algiers, &c., &c.; whence it is plain that Spanish and other wool may be used for like purposes of stuff making with the English and Irish; consequently, neither did France derive principally its woollen manufacture or trade from England, nor does that nation depend upon the latter for its continuance.

TABLE A.

Years.	Wool imported.		Woollens exported.	
	Weight. * Kilogrammes.	Value. Francs.	Weight. Kilogrammes.	Value. Francs.
1787............	7,842,085	14,391,500	....	21,811,900
1788............	6,780,747	13,544,400	....	23,560,200
1789......	6,860,087	17.061,000	....	25,709,000
1812............	7,308,380	30,627,885	1,761,281	38,303,193
1813............	5,354,455	20,303,973	1,289,517	27,539,642
1814............	1,832,472	7,699,057	700,843	13,711,202
1815............	4,431,269	5,348,792	1,336,801	38,662,677
1816............	5,785.675	8,266,084	2,202,368	68,007,529
1817............	5,612,891	16,015,862	1,508,812	49,862,593
1818............	9,854.231	25,169,916	1,389,818	44,971,455
1819............	3,428,420	10,612,687	1,350,795	40,615,461
1820............	4,912,291	8,350,895	1,494,137	43,383,660
1821............	6,876,661	11,690,328	1,369,746	39,750,591
1822............	9,117,731	15,500,142	1,101,615	40,528,113
1823............	5,481,659	9,318,820	1,018,261	33,082,211
1824............	4,409,956	7,496,925	1,141,268	36,436,512
1825............	4,639,108	7,886,484	1,182,929	37,821,130
1826............	6,435,228	10.939,887	982,849	29,848,406
1827......	7,381,857	11,130,922	1,029,100	27,369,125
1828............	7,586,889	11,390,515	1,058,922	30,025,776
1829	5,749,194	9,275,611	1,196,744	31,606,464
1830............	7,214,939	12,871,932	1,029,472	27,690,138
1831..	3,836,207	5,253,089	1,050,457	28.088,716
1832............	4,621,594	7,861.821	1,434,026	36,306,600
1833............	9,305,702	19,139,629	1,546,991	38,098.047

The statement of wool and of the woollen manufacture in France, inserted in table A, is from authentic accounts taken by the French government, and may therefore be relied upon; and Porter, in his Progress of the British Nation, in giving them, remarks as follows:

"The woollen manufacture has long been one of the staples of France, and the excellent quality of French cloths has been generally acknowledged. In some branches of the manufacture, the French clothiers have taken the lead; and to this day their finer woollens find a market in every quarter of the globe. Under these circumstances, there can be no doubt that the quantity of woollen cloth manufactured in France has increased with the growth of the population; and it appears from a table in the

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* A kilogramme is 2 lbs. 2055 decimals, or a little more than 2 1-5th pounds avoirdupois.

recent "Enquete," published by the French government, that the quantity of these goods exported has also materially increased during the last half century, although it is not shown that any progress has been made in this respect since the termination of the war with England. These facts are shown by the table A, of the quantity and value of wool imported, and of woollen goods exported in the years 1787, 1788, and 1789, and in each year from 1812 to 1833.

It appears from this table, that the production of wool in France must have kept pace with the wants of the increasing population, the importations not being greater in 1833 than they were in the three years ending with 1789, while the manufactured goods exported in 1833, were considerably larger in amount than they were at the previous period. To enable the French clothiers to compete with those of England successfully in foreign markets, a bounty on exportation is paid by the government, equal to 13 1-2 per cent. on the value; which payment is calculated to be equal to the duty imposed upon foreign wool for the benefit of the agriculturists of France.

Neither was Brabant in a less flourishing condition in point of commerce and manufactures; for in 1305, under the Duke John III., more especially the cities of Antwerp and Louvain, carried on such an immense woollen trade in the beginning of the fourteenth century, that they reckoned upwards of four thousand woollen drapers, clothiers, or master weavers in that city, and over one hundred and fifty thousand journeymen weavers. "Though surely," remarks Anderson, "the present site of this city never could contain so many people as there must have been in it by this computation; we must therefore suppose that at least all the journeymen weavers did not live within the city, but perhaps the most part in the adjacent villages."

In the reign of Queen Mary, (1533,) the peculiar immunities of the Hanseatics, or German steelyard merchants, at London, remained suspended; and her sister, Queen Elizabeth, formally abrogated them in the year 1678. These Hanseatics had been for several years loudly complaining thereof at the Emperor's court, and at the diet of the empire, whereon this year, 1582, they asserted "that by the high duty laid on woollen cloth in England, or paid by the Hanseatics, it was become (says Werdenhagen) twice or thrice as dear as it had before been; that from hence proceeded the vast increase of England's wealth, two hundred thousand pieces of cloth being yearly exported thence; three-fourths whereof we carried into Germany, and from thence a great part was carried into Poland, Denmark, and Sweden. That the remaining fourth part was sent to the Netherlands and to France, but little or none into Spain. From whence, says he, it was easy to infer the immenseness of the profit accruing to that Queen and nation thereby." The only remedy, therefore, said the Hanseatics to the German diet, "was to banish the English merchant adventurers out of the empire, and absolutely to prohibit all manner of English woollen manufactures, as what they judged would effectually bring the Queen to terms with the Hanse towns. The Queen had some friends in the diet, who, together with her own able envoy, Gilpin, long and strenuously defended her and her own merchant adventurers." "Yet, says Anderson, in the end, the Hanse-towns interest prevailed in the diet, which passed sentence against the English merchants and absolutely prohibited all English woollen goods. Yet Gilpin, by a stratagem, outwitted the Hanseatics in such sort, that the sentence could not be executed till the session of another diet, and our merchants were afterwards permitted to remove from Staden to Hamburg, where they were well received."

In the eighteenth year of the reign of Charles II., (1678,) a statute was passed for the encouragement of the woollen manufacturers of England, "that no person should be buried in any shirt, shift, or sheet, made of, or mingled with flax, hemp, silk, hair, gold, or silver, or other than what should be made of wool only; upon forfeiture of five pounds to the poor of the parish, towards a stock or workhouse for their employment."

"This," remarks the historian, "is certainly a wise and salutary law, as it is a means of consuming a considerable quantity of our light woollen manufactures. Yet such is the vanity of too many, that they will rather pay the penalty than be instrumental in promoting our own most important manufacture."

The number of yards (pieces being now of different lengths) of broad and narrow cloths, made in the years 1769 and 1770:

Years.	Broad.	Narrow.
1769	2,771,667¾	2,144,019
1770	2,717,005	2,255,625

In 1783, the annual product of the woollen manufacture of England is given as calculated at £16,800,000. The estimate of the value of woollens exported for some of the earlier years:

1718, value exported,	2,673,696
1719, " "	2,730,297
1720, " "	3,059,048
1721, " "	2,903,310
1722, " "	3,384,842

The yearly medium value of woollens exported from England, from 1739 to 1748, was £3,327,057. From 1749 to 1753, the yearly medium value was £4,189,195.

Exports of Woollens from 1781 *to* 1787.

Years.	England.			Scotland.			Great Britain.		
	£	s.	d.	£	s.	d.	£	s.	d.
1781	2,803,757	2	10	41,507	10	4	2,845,264	13	2
1782	3,003.415	14	11	49,368	3	5	3,052,783	18	4
1783	3,391,224	6	7	68,828	13	3	3,460,052	19	10
1784	3,316,360	0	6	79,557	10	0	3,395,917	10	6
1785	3,825,943	0	10	66,376	2	5	3,892,319	3	3
1786	3,429,805	9	7	83,041	12	3	3,512,847	1	10
1787	3,610,770	12	8	77,024	19	6	3,687,795	12	2

In 1839, the total exports of woollen goods from England were £6,271,645 sterling.

To the United States the same year there was exported £2,142,352.

Porter, in his Progress of the British Nation, in summing up his remarks on the woollen business, says:

"The value of woollen goods exported from England in 1700, was about £3,000,000. At the beginning of the nineteenth century, notwithstanding the great extent to which articles made of cotton had in the meantime been substituted for woollen clothing, the value of our exports of woollen goods amounted to about double that sum. We have not any record, but as the price of wool at the end of the last century was more than double what it had been in the beginning, it is probable that the number of yards and pieces sent away, was not much, if at all greater, at the latter than it had been at the earlier period.

"It will be seen from the following table B, that the value of our exports has not become greater since the beginning of this century; but owing to the diminished price of wool, and the great economy that has been attained in various manufacturing processes, the quantities have, on the whole, considerably increased."

TABLE B.

An account of the quantities of British Woollen Goods exported, in each year, from 1816 *to* 1841.

Year ending Jan. 5th.	Cloths of all sorts. Pieces.	Napped coatings, duffields, &c. Pieces.	Kerseymeres. Pieces.	Baizes of all sorts. Pieces.	Stuffs, woollen or worsted. Pieces.	Flannel. Yards.	Blankets & blanketing. Yards.	Carpets and carpeting. Yards.	Woollens mixed with cotton. Yards.	Hosiery. Dozens.	Sundries unenumerated.	Total declared value.
1816	638,369	88,588	92,691	69,687	593,308	7,056,271	3,397,187	793,793	926,264	202,900	£265,200	9,381,426
1817	467,222	90,481	91,183	50,038	585,842	3,592,331	1.934,469	820,038	764,435	119,465	182,461	7,842,768
1818	478,378	93,329	83,493	61,174	683,448	2,814,101	2,305,565	642,586	851,874	100,335	147,373	7,173,735
1819	446,872	78,525	104,468	58,578	937,944	4,621,860	2.706,904	1,144,330	824,848	161,217	170,497	8,140,767
1820	340,044	60,374	71,643	39,796	717,581	3,622,761	1,777,719	620,630	495,557	101,473	82,909	5,984,130
1821	288,700	59,644	78,944	37,183	828,901	2,569,105	1,288,409	526,124	407,716	59,960	39,337	5,586,138
1822	375,464	69,622	91,402	41,610	1,022,342	3,504,851	1,424,238	764,922	627,800	107,779	38,986	6,462,866
1823	420,497	67,757	95,870	43,447	1,078,428	4,503,612	1,926,711	884,922	1,120,326	136,597	47,042	6,488,167
1824	356,027	54,226	94,344	41,539	1,150,13[illegible]	4,311,997	2,131,632	778,426	918,469	106,420	44,619	5,636,586
1825	407,720	51,585	108,012	47,105	1,242,403	3.105,961	1,990,041	848,842	1,393,443	113,123	43,361	6.043,051
1826	384,880	45,268	126,448	47,100	1,138,808	2.959,594	2,162.834	888,324	1,793,301	106,498	45,335	6,185,648
1827	328,559	41,800	86,038	36,862	1,125,308	2,423,120	1,082,582	903,597	531,517	71,922	37,223	4,966,879
1828	371,965	51,690	122,049	47,574	1,258,667	2,518,887	1,899,600	1,195,939	846,768	148,117	43,559	5,245,649
1829	335,042	40,646	84,524	49,567	1,310,853	2,539,766	2,097,542	1,197,947	981,152	159,463	48,314	5,069,741
1830	363,075	16,186	33,465	52,777	1,307,558	1,574,920	1,839,961	811,538	1,074,077	91,285	41,948	4,587,603
1831	388,269	22,377	34,714	49,164	1,252,512	1,613,099	2,176,391	672,869	1,099,518	111,146	54,038	4,728,666
1832	436,143	13,892	29,650	30,259	1,487,404	1,572,558	2,546,328	678,656	1,000,004	143,774	64,648	5,232,013
1833	396,661	23,453	40,984	34,874	1,800,714	2,304,750	1,681,840	690,042	1,334,072	152,810	55,443	5,244,478
1834	597,189	19,543	31,795	45,036	1,690,559	2,055,072	3,128,106	667,377	1,605,056	232,766	78,236	6,294,432
1835	521,214	22,868	23,891	43,338	1,298,775	1.821,394	2,537,772	606,912	1,723,069	173,063	75,841	5,736,870
1836	619,886	20,083	29,203	47,854	1,673,069	2,067,620	3,122,341	938,848	1,778,389	207,014	110,689	5,840,511
1837	720,587	22,814	29,610	45,555	1,406,000	2,190,008	4,333,876	1,008,013	1,467,927	163,182	142,553	7,639,354
1838	387,787	23,605	22,930	43,477	1,041,636	1,685,457	2,431,683	753,964	1,051,972	74,947	92,617	4.655,977
1839	587,903	26,847	36,428	41,813	1,358,984	1,779,525	2,558,806	727,539	1,846,231	109,758	123,335	5,795,069
1840	392,854	25,025	32,572	27,749	1,655,596	1,727,025	3,148,846	906,489	2.388,282	175,023	258,379	6,271,645
1841	5,746	16,094	27,122	36,044	1,718,617	1,613,477	2,162,653	758,689	3,628,874	96,946	164,034	5,327,853

The largest export in point of value that ever took place, occurred in the year 1815, when, owing to the interruption of intercourse with the

United States of America in the two preceding years, the quantities sent to that country were unusually great. The number of pieces exported to all parts in that year, was 1,482,643 ; the number of yards, 12,173,515, and the total value £9,381,426, of which £4,378,195 was sent to the United States.

In 1834, according to Porter, there were in England—

Woollen factories at work,	1,102
In Wales,	85
Scotland,	90
Ireland,	36
Total number of factories in Great Britain,	1,318

In these were employed the following number of persons:

Males, between 8 and 12 years,	2,481	
" " 12 " 13 "	4,290	
" " 13 " 18 "	10,138	
" above 18 years,	20,568	
		37,477
Females, between 8 and 12 years,	2,283	
" " 12 " 13 "	4,268	
" " 13 " 18 "	11,112	
" above 18 years,	16,134	
		33,797
Total number of persons engaged in the woollen manufacture, in 1834,		71,274

In the same year, Porter states, the quantity of British manufactured woollen goods exported from the United Kingdom, was of the declared value of - - - - - - - - £6,294,432 3*s.* 9*d.*
Of these the amount to the United States was £1,726,934 1*s.* 6*d.*

Thus, the United States, with a population, at that time, of about 14,000,000, imported about 28 per cent. of all the woollens exported from England; while all the rest of the world, including Europe, Asia, Africa, and the English colonies, with, altogether, a population of five or six hundred millions, took the balance, or 72 per cent.

		£	s.	d.
France,	took but	45,252	15	0
Germany,	"	565,950	15	0
Netherlands,	"	388,907	17	0
Portugal,	"	270,750	7	6
Italy,	"	252,243	5	0
East Indies and China,	"	885,163	8	2
British North American Colonies,	"	268,354	8	10
British West Indies,	"	102,307	13	7
Brazil,	"	268,300	0	0
Mexico and States of South America,	"	427,803	10	0
		3,475,031	0	1
Eighteen other countries, in small quantities,		2,819,401	3	8
		6,294,432	3	9

In 1838, the woollen factories in England and Wales employed 30,115 males, and 1,387 females.

In a recent publication bearing the imprint of Dublin, 1845, called the "Industrial Resources of Ireland: by Robert Kane, M. D., Honorary Member of the Royal Dublin Society, and of the Flax Improvement Society of Ireland, Secretary to the Council of the Royal Irish Academy; Professor of Natural Philosophy to the Royal Dublin Society, and of Chemistry to the Apothecaries' Hall of Ireland: second edition;" we find the following accounts of wool and the woollen manufacture of that island:

"The woollen manufacture has been at all periods considered as of high importance in this country, so that at certain times it was deemed necessary *to take measures to moderate its prosperity*. Where ill-judged efforts for its encouragement, alternated with violent attempts at its suppression, the object of the latter was, of course, finally accomplished, and at present the woollen trade does not form an exception to the general stagnation of industry, which is so unfortunately characteristic of this country. In considering how far the natural condition of Ireland leads us to expect the developement of this industry to any important degree, it is necessary to consider the growth of wool which we possess, not merely in relation to its quantity, but also to its quality and structure.

A very large quantity of wool is grown in Ireland. The grazing counties of the limestone plain afford an herbage peculiarly agreeable to sheep. The total number of sheep in Ireland is 2,091,199. In Ulster, where industry and agriculture are most advanced, the pastoral habits are weakest. In Connaught the reverse conditions exist. To 100 acres of arable land there are in Ulster but six sheep, while there are in Connaught 34. It would be useless to attempt to calculate from this, the quantity of wool, as in fact each fleece yields numerous kinds of wool, which form quite distinct objects of manufacture. There is no doubt, however, but that were the wool grown in Ireland, manufactured in it, there would be called into play so great an amount of mechanical industry, as would afford employment to a large proportion of the people. At present great quantities of wool are exported from this country, particularly to France, and several French houses have established agencies in the centre and west of Ireland, for the more direct purchase of the wool. The wool is in France manufactured into the "mousseline de laine," so deservedly popular amongst our countrywomen, by whom, I trust, they would not be less esteemed, had they been spun, and woven, and painted without leaving Ireland, and thus have given the means of living to thousands of our countrymen.

"There are two kinds of woollen goods, which are formed by different modes of manufacture, and are founded on essential differences in the structure of the wool. Worsted goods are formed of wool, the fibres of which are long and have but little twist. In such goods the web is formed only as the web of cotton or linen goods, by the opposition of the fibres, alternately crossing and parallel. But in what are properly woollen goods, as in broadcloths, after the web has been so formed it is subjected to a violent beating in the fulling mill, during which the cloth shrinks very much in length and breadth, but thickens, and the individual threads of the web so mix in with each other, that they cannot be distinguished, until it is much worn and becomes threadbare. Now, for such goods a different kind of wool must be taken than for worsted goods. The fibres must be short and more twisted. These varieties of wool are known as short and long stapled. The cause of this difference is, that each fibre of wool consists of a series of joints, and at each joint there are a set of projections like the barbs of a fish hook. In long stapled wool these barbs are few, and very weak; in short stapled wool, they are numerous and strong. If a handful of the latter be worked in the hands the fibres will gradually interlace, and by these barbs catching in each other, will lock into a kind of web, quite independent of spinning and weaving—they will felt. It is in this way hats are made, as all furs possess the same property. Hence the making of the cloth requires the spinning and weaving of the web, in the first instance, and the subsequent partial felting of the fibres in the fulling mill. I notice these particulars, as the climate and vegetation of a country exercise a remarkable influence on the staple and the structure of the wool which the sheep produce, and thus finally on the manufactured goods. In moist cold climates, such as the British islands, the natural wool of the adult sheep, is universally long stapled and unfit for felting; whilst in dry climates, with hot summers, the wool is short stapled and felts strongly. The wool produced, not merely in Ireland, but in England also, is thus exclusively adapted for the worsted trade; and that of Ireland being of an excellent quality of fibre, is much sought after for the finer kinds of worsted, such as those already noticed of French manufacture. For woollen cloths and similar goods, the wool is imported from the continent. The great plains of the east of Europe support vast flocks of sheep, from whence we derive our Silesian and Saxon wool. The dry plains of South Australia, are also, favourable to that growth of fibre, and hence has been created, within a few years, a branch of trade most important to that colony. It has been often an object with English wool growers, and landed proprietors, to produce this felting wool in England, and thus get rid of the necessity of purchasing abroad; but it has been found impossible, after the most expensive experiments, in importing sheep of particular flocks. It has been found that in two or three generations, even of the pure breed, the influence of the climate and food totally changed the character of the wool, and brought it to the same quality as that of the native animals.

"It is thus evident that the manufacture of the native wools of Ireland, can lead but to one department of that important branch of industry, that is, the worsted trade. With regard to woollens, this country, like England, must import wool, and hence will be under the same conditions of access to raw materials as the sister kingdom. In no degree are we less favourably placed. The Messrs. Williams, so extensively and so favourably known in Dublin, and who have also large factories at Leeds, in England, have often and in public declared, that they carry on trade as favourably in Ireland as in England: the low price of coals in Yorkshire being fully counterbalanced by the cheapness of water power, and a certain advantage in wages here."

In corroboration of the fact that most of the cloths of England are made of foreign wool, we annex the following account of the importation of wool into England for a series of years, taken from British official documents:

1801	7,371,774 lbs.	1812	6,983,575 lbs.	1822	19,058,080 lbs.	1833	38,076,413 lbs.
1802	7,669,798 "	1813	—Records de-	1823	19,366,725 "	1834	46,455,232 "
1803	5,904,740 "		stroyed by fire.	1824	22,564,485 "	1835	42,604,656 "
1804	7,921,595 "	1814	15,492,311 lbs.	1825	43,816,966 "	1836	64,239,977 "
1805	8,069,793 "	1815	13,640,375 "	1826	15,989,112 "	1837	48,379,708 "
1806	6,775,636 "	1816	7,517,886 "	1827	29,115,841 "	1838	52,606,196 "
1807	11,487,050 "	1817	14,061,722 "	1828	30,236,059 "	1839	57,364,772 "
1808	2,284,482 "	1818	24,749,570 "	1829	21,516,649 "	1840	52,959,221 "
1809	6,758,954 "	1819	16,100,970 "	1830	32,305,314 "	1843	49,343,093 "
1810	10,914,137 "	1820	9,775,605 "	1831	31,652,029 "	1845	65,079,524 "
1811	4,732,782 "	1821	16,622,567 "	1832	28,142,489 "		

The annexed table shows the amount of British wool and woollen yarns exported, by which it will be seen how *immense* has been the increase from 1816 to 1841:

Exports of British Wool, and Woollen and Worsted Yarns.

Year ending Jan. 5th.	Wool. lbs.	Woollen and Worsted Yarns.	Year ending Jan. 5th.	Wool. lbs.	Woollen and Worsted Yarns.
1816,	43,631	6,490	1829,	1,669,389	436,722
1817,	37,207	8,757	1830,	1,332,097	589,558
1818,	36,912	5,451	1831,	2,951,000	1,108,023
1819,	35,543	6,598	1832,	3,494,275	1,592,455
1820,	30,653	14,142	1833,	4,199,825	2,204,464
1821,	35,242	11,081	1834,	4,992,110	2,107,478
1822,	34,226	17,678	1835,	2,278,721	1,861,814
1823,	33,208	31,078	1836,	4,642,604	2,357,336
1824,	28,563	18,138	1837,	3,942,407	2,546,177
1825,	53,743	20,060	1838,	2,647,874	2,513,718
1826,	112,424	76,961	1839,	5,851,340	3,085,892
1827,	142,986	131,002	1840,	4,603,799	3,320,441
1828,	278,552	255,659	1841,	4,810,387	3,796,644

The following table* of the average wages of different classes of work-people connected with the manufacture of woollen cloth in the county of Gloucester, England, from 1800 to 1838, shows the decrease per cent. in the wages of each class.

Description of work-people.	By whom the labour is performed.	Amount of weekly wages paid in each year.						
		1800 to 1815	1816 to 1818.	1819 to 1828.	1829 to 1835.	1836.	1837.	1838.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Sorters,	Men,	30 0	30 0	30 0	30 0	30 0	30 0	30 0
Scourers,	Men,	15 0	15 0	14 0	13 0	13 0	13 0	13 0
Beaters and pickers,	Women,	8 0	7 0	6 0	6 0	5 6	5 6	5 6
Engine men,	Men,			24 0	24 0	24 0	24 0	24 0
Feeders to scublers,	Children,	4 0	4 0	3 6	3 0	3 0	3 0	3 0
Feeders to carders,	Children,	4 0	4 0	3 6	3 6	3 6	3 6	3 6
Roller joiners,	Children,	3 0	3 0	3 0	3 0	2 6	2 6	2 0
Slubbers,	Men,	24 0	23 0	22 0	21 0	20 0	20 0	17 0
Spinners at jinny,	Women,	14 0	14 0	12 0	10 0	8 0	7 0	6 0
Male spinners,	Men,			25 0	25 0	22 0	22 0	22 0
Male pickers,	Women,			4 0	5 0	5 0	5 0	5 0
Warpers,	Women,	10 0	9 0	8 0	7 0	7 0	7 0	7 0
Master weavers and Factory weavers,	Men and Women,	64 0	16 0	13 0	12 0	11 0	10 0	10 0
Millmen,	Men,	21 0	21 0	20 0	20 0	20 0	20 0	20 0
Burlers,	Women,	10 0	10 0	10 0	7 0	6 0	6 0	6 0
Rowers or roughers,	Men,	21 0	24 0	24 0	24 0	24 0	24 0	24 0
Dyers,	Men,	24 0	24 0	20 0	18 0	16 0	14 0	12 0
Cutters,	Men,	21 0	20 0	20 0	18 0	16 0	14 0	13 0
Brushers,	Men,	15 0	15 0	15 0	14 0	14 0	14 0	14 0
Markers and drawers,	Women,	10 0	10 0	9 0	9 0	8 0	8 0	8 0
Pressers and packers,	Men,	18 0	18 0	16 0	14 0	13 0	13 0	13 0

In 1828, a committee was appointed by the House of Lords, to take testimony of the former and present state of the woollen manufacture, and very voluminous testimony was taken. It would much exceed our limits to go into the testimony to any extent, as it would occupy our whole space. There is a short part of it, however, which is very important, which we extract from "Bischoff's History of the Woollen and Worsted

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* Taken from Bischoff.

Manufacturers and Commercial History of Sheep," published in London, 1842.

"Mr. Hughes," wool broker, London, being examined, said, "As respects our export trade, certainly the duty of 6*d*. per lb. on wool was detrimental, for before that day we had enough to do to compete with the North American merchants. It was extraordinary when the duty was taken off wool rose in price. Other countries are making rapid strides to compete with us, particularly North America. Within the last twelve months there have been upwards of 5,000 bags of foreign wool shipped from the port of London alone for that country, for the purpose of being manufactured; that is, in my opinion, a loss to this country of the labouring part of the manufacture. They are now making very rapid strides, and I have no hesitation in believing, that in a very few years, they will be independent of us for coats as they now are for hats."

With respect to the home and foreign market, Mr. John Brook, blanket manufacturer, said, "I consider the home trade as safest, because we have the customers at home; but I think the foreign trade in blankets the most extensive."

Mr. Henry Hughes, wool broker and factor, London, said, "I conceive that we consume here more than two-thirds of the cloth made of foreign wool. Of all foreign wool that is imported, from my recollection, I believe it was three-fourths for home consumption."

Mr. James Bischoff, London, said, "The home market, in point of extent, is the best for woollen manufactures."

With respect to the quantity of wool produced in the United Kingdom, Mr. John Ellmer, Jun., Lewes, farmer, said, "I have a calculation of the whole quantity of short wool grown in the kingdom annually, and I make it about 55,000,000 lbs. The growth in Sussex is 2,400,000 lbs."

J. L. Calcraft, Esq., Lincolnshire, said, "I have made a rough calculation of what we suppose the county of Lincoln to contain in sheep, it is 1,834,782 lbs., they suppose them to clip seven pounds of wool each: total, 12,843,474 lbs. In 1800, Mr. Lucock estimated the product of England and Wales to be 323,326 packs, or 94,498,240 lbs. of wool. In 1828, my estimate was, 463,169 packs, or 110,164,760 lbs., taking the same number of sheep now as in 1800."

From Wilmer & Smith's European Times, of June 4th, received per last steamer, we extract the following returns to Parliament, on woollen manufactures and wool:

"WOOLLEN MANUFACTURES AND WOOL.—Returns upon this subject have been issued by order of the House of Commons. It appears that the declared value of the British woollen manufactures exported from the United Kingdom in 1844, was £8,204,936, of which £2,444,789 worth was exported to the United States of America. During the same year, 65,079,524 lbs. of sheep and lamb's wool, foreign and colonial, were imported into the United Kingdom; of which 1,924,826 lbs. were re-exported from the United Kingdom, chiefly to Belgium. Of British sheep and lamb's wool, 8,947,619 lbs. were exported to foreign countries; and 8,271,906 lbs. of British woollen and worsted yarn, including yarn of wool or worsted mixed with other materials. There were also imported into the United Kingdom 635,357 lbs., of which 47,848 lbs. were re-exported, of alpaca and lama wool; and 1,290,771 lbs. of mohair, or goat's wool, of which 97,529 lbs. were re-exported."

The following are the amounts of woollen goods imported into the United States in the respective years as designated:

1838,	$7,104,133	1841,	$6,759,334
1839,	10,646,067	1842,	8,045,797
1840,	6,226,630	1844,	9,103,278

We have given this brief narrative of the origin and progress of the woollen manufacture, with a view to show the vastly great importance that was attached to it—this, indeed, will be remembered, for it had always been considered as the great staple manufacture of England, and the seat upon the *woolsack* of the Lord Chancellor, in the House of Lords, bears testimony to the high and dignified character it has there assumed.

Indeed all over Europe it has been the care of kings, princes, and nobles—the subject of constant legislation, in each and every country; the contest having been which should carry it to the greatest extent and perfection. Would our space admit of it, we could show an expense and anxiety on this head, equal almost to any measure of public policy that agitated the courts of Europe for centuries.

But what we are more immediately interested in, is its rise and progress in the United States. The first account we have of it, commences with our colonial history. Smollett in his "Present State of the World," published in London in 1769, in speaking of New England says, "Their manufactures are chiefly coarse linen and woollen cloth for their own use, hats, paper, sugar, baking, and distilling. The disputes that have for some time unhappily subsisted between Great Britain and her colonies, have put them upon attempting to supply themselves with other manufactures, with a view to compel the mother country to yield to their demands; but they ought to be very cautious how they provoke the government and parliament of Great Britain, as it would be easy to these, without landing a single man upon the continent, to bring them into the most deplorable situation by ruining their trade; though it must be owned, this could not be done without, at the same time, hurting the mother country."

Various other writers, even anterior to this, give the same account of New England, that the colonists there were attempting to manufacture; indeed several acts of Parliament were passed to prevent it. We do not deem it necessary in this place to enumerate either these acts, or what is stated by the various British writers concerning the *arrogance* of New England in daring to manufacture—they all breathe the same spirit of threatening vengeance. To attempt anything like manufactures, of any denomination, was a crime of the deepest dye. The fact of this feeling having existed to the greatest extent in the then mother country, is too well known, and too firmly established to require further evidence from us. We notice it merely for the purpose of showing how important it was then considered to be, to confine the colonies strictly to the production of raw materials, that England might reap all the advantages which it was then well known resulted from the policy of keeping manufactures to themselves. Is it not remarkable that at the present day, when the multiplying power of labour-saving machinery increases these advantages to such an enormous extent, there should be in the United States, now happily no longer colonies, any of its citizens so blinded by abstract theories as to wish to keep us, the mere hewers of wood and drawers of water to the nations of Europe, while each one of them is so fully alive to the vast advantages which result from the employment of their skill and capital, in all the varied handicraft professions? The experiment of what is called free trade, has been tested in France, Germany, and Russia, where the most disastrous results were experienced; particularly in Russia, who abandoned the low duties, and made a new tariff, avowedly for the protection of her industry, which is the present tariff of that country. But this is digression, though we think not irrelevant. We return now to what was the state of the colonies at this early period. Smollett further says, "The trade of New England consists of various articles. At the mouth of the river Penobscot there is a mackerel fishery, from which the inhabitants supply Barbadoes and other British islands in America. They likewise fish for cod in the winter, which they dry in the frost. Their salt works are upon the improving hand; and it is said they will soon have salt enough to serve themselves. Rich mines of iron, of a most excellent kind and temper, have been discovered in New England, and if improved, in a short time they may supply Great Britain without her having recourse to the Northern nations for that commodity; especially, as the Parliament, to encourage the undertaking, allows both pig and bar iron to be imported duty free. Besides mackerel and cod, they send to Surinam and Curacoa, belonging to the Dutch, and to Barbadoes and other British islands, biscuit, meal, salt provisions, cattle and horses, planks, hoops, shingles, pipe staves, butter, cheese, grain, oil, tallow, turpentine, bark, calf skins, tobacco, apples, cider, and onions. From Europe they import wine, silks, woollen cloth, toys, hardware, linen, ribands, stuffs, laces, paper, household furniture, husbandry tools of all kinds, cordage, hats, stockings, shoes, and India goods, to the value of four hundred thousand pounds sterling. In short, there is no British manufacture that serves the purpose of luxury or ornament which the people of New England do not import." New York and New Jersey, according to Smollett, had at that time, 1769, no manufacturies of any kind; of Pennsylvania, he says, "as to the traffic of Pennsylvania, we refer the reader to what we have said of New York and the Jerseys, which is equally applicable to this province." Maryland was in the same situation, as to manufactures she had none—her principal trade was in tobacco.

Virginia and the other southern colonies, it is well known had no manufactures whatever—their trade was in tobacco, lumber, pitch, tar, corn, and provisions. The Carolinas, North and South, it appears from our author, produced at that time about eighty thousand "*barrels*" of rice, each weighing about four hundred pounds.

Of Georgia, little is said that can give any accurate idea of its trade—indeed, it would seem that it had not claimed the attention of Englishmen until 1732, when a "number of public spirited gentlemen formed a scheme of making it subservient to many noble purposes, by erecting it into a bulwark for our southern colonies against the Spaniards; of producing great benefits to the mother country; but above all, of giving employment to vast numbers of people who were burthensome at home to their friends and parishes. In 1739, a specimen of Georgia raw silk was exhibited in London, which the merchants who dealt in that commodity, declared to be as good as any raw silk that came from Italy, and worth at least twenty shillings per pound."

These sketches of the state of things at the period named, show that there were, at that time, almost no manufactures in the American Colonies—probably none except those confined to the household—for from all cotemporaneous writers, it appears that the mother country was determined to use every means to put down all manufactures in the colonies.

We return now to the woollen manufactures, of which it may be said we knew little, until the war of 1812 found us destitute of clothing, even for the army, which suffered every species of distress for want of the necessary clothing for winter.

We have arrived now at a period within the memory of many who will read this article, and can with confidence appeal to them for the state of public feeling at that time. Nothing could exceed the anxiety that was felt by all at the wretched state of the country, in want of even the comforts of life, so far as manufactures were concerned, and more particularly of woollens. All articles made of wool, rose to such a price, as to cause numbers of persons to embark in their manufacture—and the skill, enterprise, and industry of our people were never more conspicuous than on this pressing occasion*—and had the true system been pursued to sustain it, millions might have been saved that were forever lost to the country from the vacillating policy which for years kept it in an uncertain state—sometimes paying a small profit, and at others subjecting the woollen manufacturers to heavy losses. For even when a duty was laid which was considered protective, so imperfect were the laws, and so badly were they administered, that from the frauds practised at our custom houses, through false invoices, and other means of evading the statute, nothing could be made by this manufacture. Still the hope of ultimate success induced many to go on, and to the knowledge of the editor, for many years our woollen manufacturers struggled along without profit, determined not to give it up. Two or three conventions were held, of the friends of manufactures, and the strongest appeals were made to Congress for efficient aid and protection.

A large capital had been embarked, from time to time, and great efforts were made to introduce every species of economy and skill, and although it is a matter of doubt, whether even at this time, when it has grown up to such an extent as to employ (by the census of 1840) 21,342 persons, and to produce of manufactured goods a value of 20,696,999 dollars, besides many millions of household woollen articles, we say it is very doubtful whether the losses sustained during its progress have not exceeded the profits realized. The editor has had much opportunity of obtaining information on this subject, during the whole period from the peace of 1815 till now, and has no hesitation in recording the opinion that more money has been lost to the manufacturers than has been made by the woollen business since that period, although immense benefits have resulted to the wool growers and agriculturists generally. At present it pays a moderate profit only.

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* The Committee of Commerce and Manufactures in 1815, at the close of the war, made the following Report on the Woollen Manufacture at that period:

Amount of capital supposed to be invested, buildings, machinery, &c.,...		$12,000,000
Value of raw material consumed annually,..................	$7,000,000	
Increase of value by manufacturing,......................	12,000,000	
Value of woollen goods manufactured annually,.....................		$19,000,000
Number of persons employed constantly,........................	50,000	
Occasionally so employed,....................................	50,000	
	100,000 persons.	

We propose now to show its present state, according to the census of 1840, which, from what we know, we believe is sufficiently accurate to show the immense importance of our woollen manufacture, to the miner, the agriculturist, and the merchant.

The number of sheep in the United States, by the census of 1840, is 19,311,374, which, at a very moderate estimate are worth on an average two dollars per head,....................................	$38,622,748
More than one-fourth of the sheep are in the State of New York, as will be seen by the table annexed, marked (C.)	
The land in this State used for the raising of sheep is estimated at $20 per acre, but as land in some of the other States on which they are kept, is of less value, we shall reduce the estimate to $10 per acre.	
The estimate is, that each acre will keep three sheep, one-third of 19,311,374, the number of sheep, gives 6,437,125 acres, at $10,......	64,371,250
Agricultural capital invested,....................................	$102,993,998
The amount of wool raised in 1840, was 35,802,114 lbs., which may fairly be estimated at 30 cents per lb. on the average,....................	$10,740,634
21,342 persons employed in the woollen manufacture, food for one year estimated at $100 per annum,....................................	$2,134,200
No doubt more than an equal number were dependent upon these, but we confine our estimate to the number employed.	
Annual product to agriculture,....................................	$12,874,834
Amount in value of woollen goods manufactured, according to the census,	$20,696,999
Household manufactures of wool besides those made in the manufactories—estimated,....................................	$12,000,000
	$32,696,999

TABLE C.

	Sheep.	Wool. lbs.	Factories.	Manufactures of Wool.
Maine,....................	649,264	1,465,551	24	$412,36
New Hampshire,....................	617,390	1,260,517	66	795,784
Massachusetts,....................	378,226	941,906	144	7,082,898
Rhode Island,....................	90,146	183,830	41	842,172
Connecticut,....................	403,462	889,870	119	2,494,313
Vermont,....................	1,681,819	3,699,235	95	1,331,953
New York,....................	5,118,777	9,845,295	323	3,537,337
New Jersey,....................	219,285	397,207	31	440,710
Pennsylvania,....................	1,767,620	3,048,564	235	2,319,061
Delaware,....................	39,247	64,404	2	104,700
Maryland,....................	257,922	488,201	29	235,900
Virginia,....................	1,293,772	2,538,374	41	147,792
North Carolina,....................	538,279	625,044	3	3,900
South Carolina,....................	232,981	299,170	3	1,000
Georgia,....................	267,107	371,303	1	3,000
Alabama,....................	163,243	220,353	..	..
Mississippi,....................	128,367	175,196	..	..
Louisiana,....................	98,072	49,283	..	..
Tennessee,....................	741,593	1,060,332	26	14,290
Kentucky,....................	1,008,240	1,786,847	40	151,246
Ohio,....................	2,028,401	3,685,315	130	685,757
Indiana,....................	675,982	1,237,919	37	58,867
Illinois,....................	395,672	650,007	16	9,540
Missouri,....................	348,018	562,265	9	13,750
Arkansas,....................	42,151	64,943	1	129
Michigan,....................	99,618	153,375	4	9,734
Florida,....................	7,198	7,285	..	..
Wisconsin,....................	3,462	6,777	..	..
Iowa,....................	15,354	23,039	..	800
District of Columbia,....................	706	707	..	..
	19,311,374	35,802,114	1,420	$20,696,999

From a very intelligent manufacturer of woollens, we learn that about three-fifths of the American grown wool is used in the wholesale manufacture of cloth—the other two-fifths being consumed in household manufactures and for other purposes.

We have thus shown how greatly the interests of agriculture are promoted by the woollen manufactures of the country—it remains now to show their connexion with our commerce. Much of the clip of wool of this country goes into household manufactures, as will be seen by our estimate above, which is probably below the mark—as the census states the whole of the household manufactures of the Union at $29,023,380—these are, of course, principally of cotton and wool, and it is believed, much the largest portion are woollen goods; but we desire in all cases where we make estimates, to have them rather under than over.*

We propose now to show the gain to commerce upon the manufacture of both the domestic and foreign wool used in the factories, exclusive of the household manufacture.

A committee appointed at a convention held in New York, for the purpose of making a report in the then state of the woollen manufacture, made to that convention the following statement:

A woollen manufactory working up 100,000 *lbs. of wool per annum into* 40,000 *yards of* 6-4 *cloth, consumes the following foreign articles, the freight on which is as follows:*

20 pipes of olive oil, from Leghorn, at $10,	$200	
100 boxes 100 lbs. each, of oil soap, at $1,	100	
4000 lbs. Bengal Indigo, at 3 cents per lb.,	120	
15 tons of dye wood, at $6 per ton,	90	
3 tons of Dutch madder, at $10,	30	
600 gallons spermaceti oil,	200	
Other small articles of foreign production,	10	
		$750
The freight on 40,000 yards of cloth imported from Europe, is known to be only		500
Gain on freight in favor of manufacture over importation for every 100,000 lbs. of wool,		$250

Table C, shows the amount of wool grown in the United States to be	35,802,114 lbs.
†Wool imported in 1840, after deducting 86,528 lbs. exported that year,	9,014,307 lbs.
	44,816,421 lbs.

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* There are also noticed in the census, "Mixed Manufactures," which we presume include satinets, and other manufactures of wool and cotton combined; these amount to $6,545,503, which we have not included in our statement as not being fairly woollen manufactures; though probably at least one-half the material used is wool.

† Nearly the whole of the wool imported from abroad and consumed in the United States, costs under 7 cents per lb., so that the importation of it does not interfere with our wool growers. To show this we give the imports of wool for the last five years:

	Imports of wool exceeding 7 cts.	Exports.	Imports of wool under 7 cents.	Exported,
1840	494,100 lbs.	86,528 lbs.	8,606,735 lbs.	
1841	523,153 "	140,591 "	12,357,035 "	2,385 lbs.
1842	739,240 "	507,684 "	8,427,097 "	
1843 (9 mos.)	166,226 "	114,993 "	2,866,211 "	
1844	199,793 "		13,808,645 "	

Of this wool three-fifths of the home-grown wool was manufactured in factories,	21,481,269 lbs.
All the imported wool which was consumed at home as above, was also so manufactured,	9,014,307 lbs.
Manufactured in the United States over and above $1,320, 845 lbs., used in household manufactures,	30,935,576 lbs.

Now the account with commerce on this manufacture of wool will stand thus—

On every 100,000 lbs. there is a saving of $250, as shown by the preceding Report of the Committee of the Convention. The import of raw materials for manufacture exceeding the freight on cloths to that amount, 30,495,576 lbs. divided by 100,000, gives nearly 305 dividend, which being estimated at $500 per 100,000 lbs. gives	$76,250
Add also freight paid upon the foreign wool, which is ascertained to be one cent per lb., on 9,014,307 lbs.,	90,143
Paid to commerce in 1840, by home manufacture of woollens, more than would have been paid by the importation of cloths,	$166,393

Besides this advantage to our foreign commerce, the internal commerce of the country is very much benefited by the home woollen manufacture. New York produces one-fourth of all the wool grown in the United States. Massachusetts grows but a small quantity, less than one-tenth of the quantity grown in New York, yet she manufactures more than one-fourth of the whole crop. In addition to which, large quantities of corn, flour, coal, cattle, &c., &c., are annually exported to Massachusetts, on account of her woollen manufacture.

Connected with this subject is one of so much importance, and which has claimed so great an attention, both in Europe and this country, that we cannot pass it by without giving some account of it, and bearing testimony to the particular services rendered the United States by two distinguished gentlemen long since dead.

We allude to Chancellor Livingston,* of this State, and the Hon. David Humphreys, of Connecticut, formerly Minister to Spain; both of whom, about the same time, imported, at their own private cost, into this country, at great expense and hazard, a considerable number of Merino sheep.

We find that in 1802, Colonel Humphreys presented to the Massachusetts Society for promoting Agriculture, a dissertation on the subject of Merino sheep, in which he says, "convinced that this race of sheep, of which I believe not one had been brought to the United States until the importation by myself, might be introduced with great benefit to our country, I contracted with a person of the most respectable character, to deliver to me, at Lisbon, one hundred; composed of twenty-five rams and seventy-five ewes, from one to two years old. They were conducted, with proper passports, across the country of Portugal by three Spanish shepherds, and escorted by a small guard of Portuguese soldiers. On the 10th of April last, they were embarked on the Tagus, on board the ship Perseverance, of 250 tons, Caleb Coggeshall, master. In about fifty days, twenty-one rams and seventy ewes were landed at Derby, in Connecticut; they had been shipped at New York, on board a sloop destined to that river. The nine which died were principally killed in consequence of bruises, received from the violent rolling of the vessel on the banks of Newfoundland."

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* See "Biographical Sketch of Chancellor Livingston," in another part of this number.

The Agricultural Society, at a meeting held August 28th, passed the following resolution:

Voted, That the thanks of the Trustees be presented to Colonel Humphreys, for his valuable and interesting communication, this day made; and that the Vice President be requested to present the same, and furnish him with a copy of this vote.

[Extract from the minutes.]

(Signed,) L. Parker, *Secretary.*

On the 15th of December, in the same year, an appropriate gold medal was presented to Colonel Humphreys by the same society, "for his patriotic exertions in introducing into New England one hundred of the Spanish Merino breed of sheep."

THE DELAWARE AND HUDSON CANAL.

There is no improvement of the present day that justly claims a larger share of public attention than this; none that more aptly illustrates the complete triumph of art and science over physical difficulties; and none that furnishes a more striking instance of the success of persevering individual enterprise. And yet there are few, with the history, character, and location of which, the public is less familiar.

We suppose, therefore, that a few pages devoted to a brief sketch of the origin and progress of this great work, will not be uninteresting to our readers; more especially as is it connected with another matter, that has now grown to be one of national importance, namely, the anthracite coal trade.

In a Report made on the 4th day of March, 1834, by a committee of the Senate of Pennsylvania, on the subject of the coal trade of that State, we find the following notice of the Delaware and Hudson Canal:

"It only remains for the committee to notice, in connexion with the third coal field, one of the most important improvements, considered in reference alone to the coal interests, in the Union. In 1822, Maurice and John Wurts, conceiving the bold and expanded project of constructing a rail road and canal from the coal beds on the Lackawanna, near the eastern termination of the field, to the North River, in the State of New York, obtained, in 1823 and 1825, acts of incorporation, and succeeded in forming the Delaware and Hudson Canal Company, who undertook and completed this herculean enterprise.* The footstep of man had scarcely marked the spot where is now erected the beautiful and flourishing village of Carbondale, containing a population of twenty-five hundred souls.* The Moosic Mountain, towering eight hundred and fifty feet above the level of the Lackawanna, which to ordinary minds would have presented an insurmountable barrier, and bid defiance to individual enterprise, dwindled, in the eye of science, to a mole hill, and presented no impediment in the way of a powerful and adventurous company. They have constructed a rail road from the Lackawanna to the Lackawaxen, a distance of sixteen miles, overcoming the mountain by means of eight inclined planes; "five of them ascending planes, worked by stationary steam engines, and three of them descending planes, acting by gravity." From the termination of the rail road at Honesdale, in Wayne county, another town which has sprung up solely under the auspices of the company, and now contains fifteen hundred persons,† a canal is continued down the Lackawaxen to the Delaware, and from thence through the State of New York to Rondout, on the North River, ninety-four miles above the city of New York, a distance of one hundred and seven miles. Whole length of canal and rail road, one hundred and twenty-three miles.‡

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* Historical truth requires that we should add the name of William Wurts, Esq., of Philadelphia, to the two named in the text. He was probably the first person who conceived the idea of transporting the coal of the Lackawanna valley to market by an eastern route. With such views, as early as the year 1814, and while that valley was yet an unbroken wilderness, without road or bridle path above Providence, he explored

This work was completed in 1829, at an expense of two millions three hundred and five thousand five hundred and ninety-nine dollars and fifty cents, and in the various results produced, furnishes one evidence of benefits conferred by an incorporated company, which would otherwise not have had existence, and exempts this company from the general objections resting against corporate bodies having mining and trading privileges. Without an act of incorporation, and the inducements of mining privileges, this county, now filled with an active and enterprising population, and furnishing one of the best markets in Pennsylvania, would have remained, for many years, perhaps, a barren waste; and possibly it would not be going too far to say, that the coal of the Lackawanna would never have found a market by this route, or in this direction. Like the Lehigh company, they have disregarded the great mountain barriers, dividing the waters of the Susquehannah and the Delaware, and conducted the coal of the third field from its natural, but more circuitous

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it and the passes of Moosic Mountain, to find an outlet to the Lackawaxen and Delaware Rivers, selecting and purchasing such coal lands as were most eligibly situated in reference to that object. It would be curious and interesting, if our limits permitted, to detail the incidents of these early, and, at that day, apparently futile efforts, which have since resulted in the establishment of the prosperous company whose history we are giving.

* Its present population is about 3,500.

† Its present population is rising 2,500, and it is the seat of justice for Wayne county. This place is named after Philip Hone, Esq., who was the first president of the company, but resigned that station when he was elected Mayor of the city of New York. This city owes to him an everlasting debt of gratitude, for his enlightened, liberal, and uniform support of this company at all times. He was one of the Commissioners appointed by the Legislature, to negotiate with the Messrs. Wurts, for the purchase of the property, to organize the company, and receive subscriptions to its stock; and he was among the largest, if not *the* largest of the original subscribers to it. At a late day, when a dark cloud lowered over the institution, and some of those who held the same relation to it that he did, shrunk timidly from the path before them, he remained at his post, and proved a firm, efficient, and steadfast friend. He has been in the Board of Managers since its origin.

‡ The rail road is 16, the canal 108 miles long; whole distance, 124 miles.

channel, directly to the city of New York, and the other increasing markets of the East and North. In 1833, this company sent to market one hundred and eleven thousand seven hundred and seventy-seven tons of coal, and made a dividend of seven per cent. upon their capital.

This work affords also a new outlet for the vast lumber trade of the northern counties. During the last year, about five millions of feet of lumber were conveyed upon the rail road from Carbondale to the Lackawaxen, and thence by canal to the Delaware, where it is rafted down the river.

The charter of this company is perpetual; and it was granted, as is expressed in it, for the purpose of forming a connexion between the Hudson River and the northern coal field of Pennsylvania, and thereby supplying the city of New York, and other parts of the State, with coal. The work was commenced in 1825, and at the close of the year 1829, this important line of communication was effected, by a canal of 108 miles in length, of a capacity to admit the passage of boats of twenty-eight tons burthen, and by a single track rail road of sixteen miles, estimated to be equal to the delivery of about 100,000 tons during the working season.

A small quantity of coal was brought to tide water in the fall of 1829, by the company, and the business was systematically commenced in 1830 But in its early efforts, this company encountered peculiar and formidable obstacles. It found the coal market, which was comparatively small at that day, pre-occupied by older and well established concerns. Those who were interested to exclude a new competitor from any participation in the trade, industriously misrepresented the character and quality of Lackawanna coal; and, unfortunately for the company, the small quantity which it brought to market in 1829, being surface coal, that had laid exposed to the action of the elements for ages, furnished plausible ground for these interested statements, and created a prejudice in the public mind against Lackawanna coal, which it required years to counteract.

But the competition of older and rival coal interests, which the company thus encountered, and might reasonably have expected to encounter, was by no means the greatest obstacle in its path. Immense specutions were daily occurring in its stock; and a powerful and deeply interested party thereby created, to destroy an enterprise, that should, from its nature, have commended itself to the good will and fostering care of every man in the community, but especially in the city of New York. Yet, the credit of the company was assailed in every possible way ingenuity could devise. The coal, which, to place within reach of the New York market, it had expended millions, was proclaimed to be valueless: or if it was otherwise, it was boldly asserted, that the works of the company were so imperfect in their construction, and so perishable in their character, as not to be capable of passing a sufficient amount of tonnage to pay an interest on their cost.

Against these complicated and trying difficulties, the company struggled forward with patience and perseverance; gradually expanding its market and business, attaining a portion of strength and usefulness, and, from year to year, communicating its progress to its stockholders, many even of whom, however, with the community at large, seemed for years to be skeptical in regard to its prosperity. Rendered cautious by the early trials to which they had been thus wantonly exposed, and admonished, by this continued want of confidence, that the company must rely exclusively on its own resources, those to whom the administration of its affairs was committed, deemed it prudent to suspend dividends from 1833 to 1839. This interval, however, had been one of prosperity, despite every obstacle—and during it, nearly three hundred thousand dollars of debt had been extinguished, and the aggregate profits had amounted to over half a million. In the interim, the coal market in general, and that of this company in particular, had greatly expanded—the cloud of prejudice which had rested on Lackawanna coal was dispelled, and it had attained a high reputation, as a fuel for generating steam, and in many branches of mechanical and manufacturing business.

Regarding their market as now established on a basis sufficiently broad and stable to insure income, and the accumulated profits furnishing an ample fund against the debt to the State, growing due in 1848 and 1850, the company resumed dividends in 1839; and they have been regularly continued since, at the rate of 8 per cent. per annum, except the year 1842, when the dividend was 10 per cent. In the mean time the aggregate profits beyond dividends have amounted to over $750,000; and all indebtedness of the company has been extinguished, other than that of the State above mentioned, for which ample provision has lately been made.

Considerable sums have also been expended in improving and strengthening the company's works as originally constructed, and in increasing their capacity; which sums have been charged as disbursed to annual expenses, instead of capital, as they might with propriety have been; as they increased the value, and added to the productive power of the property. In consequence of these improvements, the company was enabled, in 1841, to bring to tide-water 192,270 tons of coal; although in 1830 the capacity of the rail road was estimated as equal to the transit of about 100,000 tons per annum.

During the year 1841, however, events were maturing, that were calculated to exert an important influence on the coal trade. The Reading Rail Road was approaching its completion, and a struggle commencing between it and the Schuylkill Navigation Company, destined to affect very materially the price of coal. At the same time, the strenuous efforts, which the Delaware and Hudson Canal Company had been making for years, to introduce its coal into the furnaces of steam boats, began to be crowned with success. Foreseeing, therefore, a necessity of providing an increased supply to meet this new demand, and at diminished rates, to encounter the competition of lower prices, the Board of Managers of the Delaware and Hudson Canal Company determined to commence, and gradually complete the important work, of enlarging and deepening their canal, so as to admit of larger cargoes, and thereby reduce the rate of freight—and of doubling the track of ten miles of their rail road; at the same time so altering its grade and construction, as to substitute gravity and stationary steam power for horse power thereon. This improvement in the road, dispensed, at once, with the use of one hundred and ten horses, and the men and boys requisite to the management of them.*

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* These alterations and improvements in the rail road, were suggested and have been executed by James Archbald, Esq., the engineer in charge of the company's mines and rail road. The impress of his genius and professional skill, is strikingly

These changes had been so far effected, that during the year 1844, the company transported 255,000 tons of coal over the rail road; and boats were able to navigate the canal with cargoes of forty-five tons; being an increase of more than fifty per cent. on the original canal cargo, and of more than one hundred per cent. on the original capacity of the rail road. The result, as to economy, is equally satisfactory with that in regard to quantity—for it is found, that since the benefit of this change in the mode of transportation began to be felt, the cost of coal delivered at Rondout, compared with former rates, has been lessened in a sum of over two hundred thousand dollars.

But it is also found by the experience of last year, that the capacity of the rail road is still unequal to the demand upon this company for coal; for although it was able, during 1844, to supply a demand to the extent of over 250,000 tons, and at prices which made a clear profit of over 13 per cent. on its capital, still it was obliged to decline applications for 80 to 100,000 tons more, because of inability to increase the quantity over the rail road, beyond that above mentioned. Nor can this quantity be essentially increased, until the railroad is made a double track throughout, and an alteration effected in one or two of the planes west of the summit. In this work the company is now engaged, and also in adding six inches more water to the present depth of the canal, so as to permit the passage of boats of 50 to 55 tons burthen. The benefit of both these improvements will be realized partially in 1846—and fully in 1847, when the rail road will be equal to the delivery of 400 to 450,000 tons per annum. The canal is now equal to the transit of over 700,000 tons per annum—and when the additional six inches of water is added, its capacity will be over 850,000 tons.

There is not a doubt but that the market will call for a quantity of coal equal to the proposed increased capacity of the rail road, by, or before the time it can be effected. Indeed, we are assured, that the market is at this moment, very little, if any, behind that quantity—for although the company will be able this year, to supply nearly three hundred thousand tons, still, as in the year 1844, it is obliged to decline orders that, in the aggregate, amount to nearly 100,000 tons more, from inability to transport it over the present rail road. The increased demand upon this company for coal, seems to be larger and more rapid than in the mere ratio of increased consumption in the general market—arising from the fact, that within the two last years, steamboats have generally adopted anthracite coal as their fuel—and among all the varieties, Lackawanna coal, from some peculiarity in its composition, appears to have a decided and universal preference for this purpose.

The stock of this company, which once sold as low as 48 for 100, and was for years a bone of contention between the opposite opinions of Wall street, has recently sold at 145 for 100. It is now rarely seen on the stock list, and seems to have attained universal confidence. Those who are most familiar with the affairs and prospects of the company, and whose opinions, expressed years ago, have been verified by time, enter-

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visible throughout the whole of this department of the company's business. The enlargement of the canal was projected and executed by R. F. Lord, Esq., the engineer who has for fourteen years past ably and efficiently supervised the works, &c., from Honesdale to Rondout.

tain no doubt, but that ere long, it will increase in price, and be sought for as an investment by those who would not purchase it when they might have done so at 50. Be this as it may, it is a gratifying reflection, that those who projected this noble work, and who have abided by it, and laboured in it, in its darkest hours, with a faith that never wearied, and a perseverance that never tired, have lived to see their plans and efforts crowned with entire and unqualified success.

With equal pleasure do we advert to the vast benefits resulting to the community from this great work, conceived and accomplished by private enterprise exclusively. To the city of New York, furnishing as it does an indispensable necessity of life at low prices, its importance is too obvious to require comment; and yet, strange as it may seem, the owners of real estate in that city, who are most benefited by it, have, with a few honourable exceptions, never manifested a correspondent interest in its success.

But, as more in accordance with the character and object of our Journal, we desire to enumerate a few facts, which illustrate most clearly the value and importance of such improvements, in developing the resources, while they foster the domestic industry of our country.

The operations of this company commenced in a wilderness; in fact, the whole line of the rail road, and a large portion of the canal were located in primitive forest. Their effect upon the county within the scope of their influence, and their consequent importance to the country, can scarcely be realized by any one, whose observation and knowledge do not enable him to compare the state of things now, with what it was when this project was undertaken. We have already spoken of Carbondale, which is the western *terminus* of the rail road, and where are situated the mines that the company are now working. In 1828, there was but one building on its site, and that a log tenement erected by the Messrs. Wurts, during their early operations, when there was neither a road nor horse path leading to it. It now contains a thriving, industrious population of 3500, occupying good buildings, and there are turnpike roads passing through it, on which daily stages are running. It is one of the best cash markets in Pennsylvania, for every agricultural product; and in addition to the coal trade, by which it has been created, there is a large amount of lumber business done here, by means of the rail road and canal. Honesdale, the eastern *terminus* of the rail road and the head of the canal, like Carbondale, was covered by the primitive forest when these works were projected. It now contains a population of 2500 to to 3000 persons, which is daily increasing, and it has become the county seat of Wayne county. This rapid advancement is marked by corresponding improvements in the surrounding country, which finds an abundant market on the line of the works—lands, which before the construction of the canal, &c., might have been purchased for two dollars per acre, cannot now be had for ten. Flourishing villages, manufacturing establishments, and mills, have sprung up at intermediate points, where the country was before unsettled and wild, between Carbondale and Rondout. This latter place, which is the depot of the company on tide water, contained but three or four houses when the canal was commenced. It now contains a population of about 2000—there are four steamboats, twenty barges, and fifteen sailing vessels belonging to it; and it bids fair to outstrip in a few years, its neighbour, the ancient village of Kingston, both in population and business.

During the fourteen years that the canal has been in operation there have passed though it to the North River, 1,878,033 tons of coal—and it is extensively used for the transportation of merchandize, manufactures, lumber, mineral, and other productions of the country.

There are now five hundred and fifty boats engaged in the coal and miscellaneous trade on the canal; and during the year 1844, there were two thousand two hundred and twenty-eight vessels loaded with coal at Rondout. The value of this trade, even in its infancy, to our coasting tonnage, and its usefulness as a nursery for seamen, is too obvious to require comment.

Commencing at Carbondale, and terminating at Rondout, and enumerating all who are engaged in the company's business, or receive compensation for their labour directly from it, we find that men and boys, they exceed twenty-seven hundred; and they, in their turn, feed and cherish a multitude by their earnings.

The company is itself a large consumer in its business, not merely of agricultural products, but of many articles, the supply of which tends to foster manufactures, and foreign and domestic commerce. We would mention particularly iron, oil, lard, and powder. During the year 1844, its consumption of powder was over 60,000 pounds, of oil 7,000 gallons, and lard 23,000 pounds.

There is one feature in the arrangements of this company, which is worthy of all commendation, and of imitation by others. For thirteen years past its locks have been closed on the Sabbath, and all in its employment have an opportunity to enjoy the privileges of the day.

On the whole, whether we regard this noble work as commenced, prosecuted, and consummated by private enterprise, finding its own reward in well-deserved success, or as a great public institution, in the operations of which the community have a deep interest, we cannot but rejoice in its prosperity, and congratulate all connected with it, on the broad and stable foundation on which it is now placed.

ON THE TARIFF,

AND THE EFFECTS OF THE BRITISH POLICY.

We have long thought if our people would bring to an examination of the tariff question, the same common sense they use in determining their matters of every-day business, it would soon be difficult to find one thinking man in the United States opposed to protecting the labour of his own fellow-citizens, by whose exertions he lives, and whose toil ministers to his happiness; and if at the same time our citizens would open their eyes to the effects upon our interests wrought by the settled policy of the British Government, they would all be in favour of placing the protection of our own industry upon such a firm basis as to defy the schemes and projects of British statesmen and politicians. To call the attention of the public to the operation of this British system of policy, is the object of this article, in the hope that it will so far excite notice as to induce a still further investigation of the subject, which requires only to be known, to have its proper effect upon our country.

Although we admit, as all must, who have examined the question, that agriculture is the mainstay of our country, yet it must now have become equally apparent, that from our position on the earth, it will not answer to depend alone upon our agricultural productions. If it should be deemed necessary to prove this, for example, take the condition of the island of St. Christopher's, in the West Indies, and that of Rhode Island, some little time anterior to our revolutionary contest, and before the establishment of manufactures in our country—both equally well settled and well cultivated, both equally fertile, and of almost the same size; yet, in a commercial light, formerly, no two places could be more different. The natural exports of St. Christopher's were of great value, while the exports of Rhode Island were too inconsiderable to be mentioned. The conveniences of life were to be had in the latter; but if we were in search of articles of commerce, we were obliged to approach nearer to the equator. But what a mighty change has the introduction of manufactures into Rhode Island, fostered by the protective energies of a tariff, caused in the relative position of these two places? Now Rhode Island, for its population, is the richest State in America; while St. Christopher's, depending alone upon its agriculture, as formerly, has decreased in wealth, and is scarcely mentioned.

The English government well understood this distinction; and as a means of subjugating the colonies, they confined them to agricultural pursuits, and prevented, as far as possible, the establishment of manufactures in the eastern and middle settlements. Such a prohibition was unnecessary for the south—their surplus agricultural products always yielded them a sufficient amount of wealth to prevent the wish for a change in their condition. This natural state of the country still continues, and indicates the importance to us of the protective tariff system: by which the north, the east, the west, and the south may be made mutually useful to each other.

The English have always pursued the policy of encouraging only their own people. So soon as they became possessed of East Florida, in 1764, they set themselves about raising the Turkey madder, in order to destroy the Dutch market for that article. Previous to that period, they had received the most of that article from Holland: and Dr. Stork, in recommending its culture in Florida, observes:

"While we encourage the *growth* of it in our *colonies*, we may have the advantage of *manufacturing* this valuable commodity *at home*, for which at present we pay sums scarcely credible, to the Dutch."

Here is the true English policy in a few words; and that policy, *to manufacture at home*, has rendered them the most wealthy, and most powerful nation of the earth. Why should we not follow such a prosperous example?

The reason why we have not followed it to the extent we should, is the result of another portion of the same British policy—of that great system which has so long been pursued, and with regret *we* say it, with too much success, in casting dark and gloomy shadows over the mental vision of our people, and thus preventing us from seeing the true interests of our own country; and which has so long kept the south from uniting with the north and east in opening for themselves a mine of inexhaustible wealth. Let us for a short time examine some of these favorite positions of our friends across the Atlantic; and by so doing we shall see their fallacy so broadly exposed, that we will wonder how it can possibly be, that men of sense will still persist in believing them. But prejudice, that obliquity of the human mind, is an awful engine of destruction as well among nations as individuals.

Intelligent Englishmen often express their surprise, that the United States should be so blind to their own interest as not to see, that it is the system of a protective tariff rigidly adhered to, which alone sustains Great Britain under the enormous load of her hopeless public debt and overbearing taxation; that it is that alone which has enabled her to give law to Europe; and to subjugate a world almost in the East; and that it is that which is enabling her to extend her power and colonies into almost every portion of the globe. It is curious to observe with what jealous care and anxiety the preservation of this British system of policy is guarded, and how soon her legislators take alarm at the least indication which threatens danger to it. Thus it is, that we see whenever Congress shows any indication towards a protective system, the British Parliament revive their project of reducing or repealing their corn laws, and permitting free trade; and this they continue until they have lulled our people into security; England has always been playing this game. She has talked about free trade for nearly a century, and never practised it a week. It is the old story of promise without performance, and theory without practice. She points out to us the road, which she solemnly protests will lead to a temporal elysium; but so far from ever treading it herself, she prefers the primrose path of national prosperity. When some years since, our statesmen were revising the tariff in reference to protection, Mr. Huskisson and other members of the British Parliament, became greatly alarmed. At first they scolded, and blustered, and threatened retaliation; but deeming that exceedingly difficult, if not impossible, they suddenly changed their note, and sung for our enchantment, the syren song of *free trade*. They actually carried the jest so far as to make some show of reducing their own imposts on some articles, from 500 to 100 per cent; whilst unfortunately both duties were equally prohibitory, and either effectually excluded the rival fabrics of other nations. Yet they held this up to our vision as an evidence of their sincere love for free trade, and what they were pleased to term reciprocity between nations—that is, for us in any event to take their manufactured goods, and they to receive from us in payment such products as they cannot raise for themselves either at home or in their colonies. This is reciprocity and free trade with a vengeance.

After the passage by Congress of the celebrated *Compromise Act*, as it is called, which provided for the gradual reduction of all duties to 20 per cent., the golden promises of unrestricted trade were heard no longer in the Parliament of England. Her liberal economists took a comfortable nap of eight or nine years, only to be awakened on the renewal of the discussion in relation to our present tariff in this country. And then we were again amused with the dulcet strains of British generosity, and the glories of free trade.[*] The Duke of Wellington, however, very recently, with the frankness and candour of his own known character, in reply to Earl Grey and others, stated in the House of Peers, the true and permanent policy of Great Britain, in observing, "that when free trade was talked of as existing in England, it was an absurdity. There was no such thing, and *there could be no such thing as free trade in that country.* We proceed," says he, "on the system of protecting our own manufactures and our own produce—the produce of our labour and our soil; of protecting them for exportation, and protecting them for home consumption; and on that universal system of protection it was absurd to talk of free trade." This is the true system, not only for England, but also for the United States; and it should be our system, and be guarded by us with as much care and anxiety as it is by the British statesmen.

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[*] For some of the preceding ideas we are indebted to the Southern Review; but to what number, or how far precisely, we cannot state, as the work is not before us. We read it some two years since, and was then, much delighted with the article, that we perused it two or three times, and thus it became partially committed to memory.

Another prominent feature of this British scheme of polity is to allay the fears of the south as to the culture of cotton in India, and to induce in the minds of the southern planters an ill-founded jealousy of their brethren in the eastern States—and in this they have been but too successful.

They endeavor to make our southern brethern believe, that the price of their cotton is reduced by the operation of our tariff, when they in fact control that price by the encouragement they offer to the culture of cotton in the East Indies.

Those who assert that the East India cotton cannot come in competition with that raised in the United States, and that Great Britain will always be obliged to look to this country for her supply of that article, for the reason that cotton cannot be raised in the East Indies, are deceived, and intentionally deceived, by the British nation, until their cotton projects in the East are completed. It is precisely the course they pursued in relation to our indigo, towards the close of our revolutionary contest; previous to which contest, two-thirds of the quantity of that article consumed in Great Britain was raised in the southern United States. While in our colonial state the British government used every exertion in their power to introduce and extend the culture of indigo in this country, and were successful in that attempt; so much so that from the small colony of Georgia alone, as early as 1765, they exported 17,000 pounds of indigo, at two shillings sterling a pound; and the indigo which used to be raised and manufactured in this region was much esteemed for its beautiful colour and good quality, the colours being brighter than that fabricated at St. Domingo, then thought the best made by the Spaniards. As soon as the British government became satisfied that the independence of the United States must be eventually acknowledged, they commenced the culture of indigo in the East Indies, and continued their exertions to that point until in May, 1792, the Directors of the East India Company first announced the success of their attempt to raise "indigo in sufficient quantity, and of a quality to rival that of the United States, and to exclude the latter from the English market." The importance of this branch of trade thus lost to us by the same course of policy now pursuing in reference to our cotton, may be inferred from the fact that, while in 1788, the total imports of indigo into Great Britain amounted to 2,096,911 pounds, of that amount 1,060,164 were imported from the United States. The British policy having thus destroyed our market for that article, we had to stop producing it, and turn our attention to something else; and now, in place of exporting annually over a million pounds of indigo raised and manufactured by our own people, in 1828, we imported 1,064,491 pounds, the most of which was raised and manufactured by British subjects! That this is the course pursuing in relation to our cotton is evident, from many facts of recent occurrence, and among others, from the public sale of cotton at Liverpool, on the 3d of March, 1843—when Madras and Surat cotton sold for 3 3-8*d*., to 3 3-4d. for middling to good fair, Slith (East India) Western kind for 3*d*. to 3 1-2*d*. for ordinary, and Demarara cotton for 2*d*. to 3 3-4*d*. for very common seedy and stained, and 6 1-4*d*. for fair—while at the same sale American cotton sold for 3 1-2*d*. a 5 1-4*d*. for ordinary to good. What chance have we under such circumstances? None; unless we do as the English are now doing, build up a *home market*, where our cotton will command a steady, uniform price, and no East India or Demarara cotton can come into competition with it. Every year will make it worse. There may be periods of occasional excitement, when the price of cotton will appear to revive; but the general tendency will be downward, until many of our planters will be compelled to turn their attention to producing some other article, unless a home market should be previously created to obviate such effect; without that, the southern planters will never again see the day when they will get such prices for their cotton as they did some seven or eight years ago. *We* may be told, perhaps, that was a temporary depression in the price of American cotton; and that it has much improved since. It is not so much for the particular price that *we* cited that instance, as to exhibit the principle of the competition which the American grower must always meet in that market, and with a continued and increasing force. But let us examine the improvement, as it is called:

The following statement exhibits the price of American cotton in Liverpool on the 22d of September last, compared with that of the growth of the British colonies and Egypt:

American Cotton.		*British Cotton.*	
Upland cotton,	4*d* to 5⅜*d*	C. W. India,	4⅜*d* to 6⅜*d*
Mobile,	4*d* to 5⅜*d*	Madras,	4*d* —
New Orleans,	3¾*d* to 6¼*d*	Egyptian,	5¼*d* to 6⅜*d*

This view is certainly any thing but favourable to this country. The import of cotton into Liverpool, for the week ending on that day, was still more unfavourable, showing only 2,441 bales of American cotton, while that from the East Indies amounted to 12,401 bales. On this, however, *we* place but little reliance, many circumstances not connected with the general trade may have affected the importations of that particular week. *Our* main object in noticing it, is to show that cotton continues to be imported from the East Indies. *We* have not referred to the price of Sea Island cotton, as that species can never be more extensive than at present, and can never be of sufficient quantity to regulate the market. If, however, it should be thought that cotton should be brought into the estimate, *we* would then observe, that at the same sale, while American Sea Island cotton sold for from 7*d*. to 9*d*. English—Barbadoes cotton sold for not less than 9*d*. Thus showing that, so far from militating against the view which we have thus taken of the American cotton market in England, and the effects produced upon it by the British system of policy, the increased prices sustain it, and enforce upon us the absolute necessity of looking at home to the sustaining of our own products.

At the commencement of the year 1843, the English correspondents of some of our presses informed us, as interesting news from Bengal, of the entire failure on the part of the American planters to raise cotton in that district, and that the United States cotton-growers have little to fear from that quarter for some time to come. The English would have had us believe, that this was a failure to raise cotton in the East Indies, and not confined to a comparatively small extent of country. It emanated from a source known to be adverse to the protective tariff policy of the United States, and is, therefore, to be ranked with the cry of "free trade," "the reduction of English duties on American products," and "the modification of the corn laws," which have been so long used to prevent the people of the United States from adopting, as a settled policy, the protective tariff system. That they are busily engaged in fostering the growth of cotton in the East Indies, is evident from the official statement of the stock of cotton in Liverpool on the 31st of December, 1840 and 1842:

	United States.		East Indies.
In 1840, there were..............	271,175 bales.		38,610 bales.
In 1842, the cotton of the United States had decreased to.......	260,180 bales.	The other increased to..........	100,470 bales.

So that the East India cotton, from being less than one-seventh of the amount of the United States cotton in 1840, had increased in the two years, at Liverpool alone, to become more than one-third. The stock of cotton on hand in all the ports of England and Scotland in 1840, was:

United States,....................................	304,990 bales.
East Indies, ...	93,000 "

In 1842, the United States had decreased to 283,444 bales, and the East India cotton increased to 179,448 bales.

This does not look as if the East Indies could not raise cotton, or as if the English would not use it, as we have been frequently told of late. There is a certain and steady increase every year in the quantity of East India cotton sold in the English market, and an equally certain and steady decrease in the demand for the cotton of the United States in that country. This simple fact, proved as it is by the latest statements, should open our eyes to the paramount importance of supporting our protective system, and thus create a market for our cotton and other agricultural products within our own borders.

As before remarked, many of our southern planters have fallen into the erroneous belief, that the selling price of their cotton has been reduced in the British market by the operation of our tariff system, when, in truth, but for that system, they would have been entirely ruined. On the contrary, the reduced value of their staple, as compared with the prices which it bore twenty-five years since, is to be attributed to the operation of the settled British policy; which is readily seen, when we bring into view the prices and importations of East India cotton during the last forty years. At Liverpool, for the sixteen years, from 1802 to 1818, inclusive, the price of United States upland cotton varied from 35 1-4 pence per pound, to 15 pence per pound; eleven of those years it was above 20 pence per pound, and only one year, (1811,) as low as 15 pence per pound; this was before they raised much cotton for exportation in the East Indies. But for the twelve years from 1819 to 1830, both inclusive, the highest price was 14 pence per pound, and that only for a single year, (1819,) and during the remainder of the period it sold for from 10 3-4 pence to 5 pence per pound. This comprises a large portion of the whole period during which complete statements were kept of this branch of commerce, the value of cotton exported being first officially given for the year 1802. It will be seen that the price of American cotton was regulated in the British market, not by any policy in our own country, but, by the produce of their own East India colonies. When our cotton was at its highest price in Liverpool, in 1818, and previous, the British merchants and manufacturers commenced making large importations of cotton from the East Indies; and in 1818 and 1819, the importation of East India cotton into England *exceeded* the supply from the United States, although the importation from this country, in 1818, was 92,471,178 lbs., and in 1819, 87,997,045 lbs.

The effect of this great importation from the East Indies was at once seen in the price which our cotton bore at Liverpool. In 1818, it was sold at 17 *a* 20*d.* per lb., and in 1819, at 12 1-2 *a* 14*d.* per lb. Let the price of American cotton rise again above what the English manufacturer chooses to pay, and you will again see the importation of East India cotton into Great Britain exceed that from the United States, until the price of our staple is reduced to their standard. So that our southern planters must either be content to receive from 5 to 8 pence per pound for their cotton, or establish a sufficient market for it at a fair settled price in their own country. The object of establishing a steady and increasing demand in a growing empire, at what must of necessity be fair remunerating prices, ought, in a common-sense view of the case, greatly to overbalance the desire for a fluctuating and unsteady market in an old country, whose avenues of export trade are either fixed beyond the power of extension, or who is obliged to make wars for the avowed purpose of opening new and uncertain ones.

So long as our cotton at Liverpool remains at or below 8 pence or 9 pence a pound, it is better policy on the part of the British people to manufacture their own cotton in the East Indies, where it is raised, and send out for sale the manufactured article, and to purchase and work up in Great Britain the staple from the United States. But when cotton gets above that price, it will bear the transportation from so long a distance as the East Indies, and we will again see the importation of East India cotton into England exceed that from the United States, however great the quantity of the latter may be. Thus it is that Great Britain will always have it in her power to regulate and limit the price of our cotton in her own market, and keep it down to such a rate as may suit her interests. And when we consider the great and increasing facilities of intercourse between Great Britain and her East India possessions, and observe that all the passengers and light goods which formerly occupied a large portion of their trading ships, now pass through Egypt, and by steam vessels, it must be evident that the freight of heavy goods, cotton, &c., must, from the competition necessarily incident to such a state of circumstances, be greatly reduced, which reduction will increase the rivalry between the East India and United States cotton, by enabling the former to be brought to that kingdom in greater bulk, and at a lower rate than previously, which will, as a matter of course, tend to keep down the price of our cotton. We now begin to see and feel the effect of this course of trade, although many will not yet own it. We are now satisfied, and congratulate each other on "*a shade of advance*" in our cotton; it did not use to be so; a half-penny, a penny, or two pence in a pound, was what we formerly looked for. Will many of us never open our eyes to the real state of the case between Great Britain and the United States, until sad and ruinous experience compels us to do so? That experience is fast coming upon us, unless we adopt a settled policy to counteract it. We have before observed that the demand for American cotton in the British market will continue to decrease unless at reduced prices. It is no answer to this statement, to assert that the same amount has been shipped from the United States this year as the last. We may send all our crop there, if we will pay the freight, duties, and storage; but what does that avail us if it is not sold, and remains on hand. The close of the year 1843, showed "a very large supply over and above that on hand at the corresponding period of the last year;" the increase of the quantity thus on hand, with the expenses attending it, will soon eat up all the profits we can make on that really sold. With a steadily increasing home market, to supply the demand of a people growing with a rapidity of which the world's history has no parallel, such a state of things cannot exist.

Notwithstanding all these facts, the English are now again urging upon us that we should not levy such heavy duties upon their manufactured articles, because they will always be obliged to take our cotton. Admitting that to be the fact, we owe them no thanks, for they have spent hundreds of thousands pounds sterling in the endeavour to raise cotton in their East India possessions, and also in Egypt, with the avowed object of breaking up our cotton trade. And if they have not been successful, it has not been from a want of the desire to supplant us. But they still insist that we should not do so, because they are willing to take our breadstuffs, of which we have a great surplus, in exchange for their manufactures. This is not true; they never have been willing to do so, and never will be. They are now, at this very moment, by means of premiums, and other methods of encouragement, using all their exertions to increase the products of their wheat and other grain lands; so that no reason may exist for an alteration in their corn laws, for the purpose of supporting their own population. And whatever their politicians may say for effect upon the councils of the United States, their agriculturists boast that ten years from this time, they will have a large surplus of grain to export, in place of importing any. Our attention has very recently been called by a very intelligent gentleman, who was formerly a resident in England, a native of that country, and who is well versed in their policy, to a series of experiments, recently made in that kingdom, in producing wheat. The soil on which they were tried was what had been considered there as worn out, which must have been truly a worthless soil compared with any of ours. The first year, by the use of a compost, it produced twenty-five bushels of wheat to the acre; by the further addition of the same compost, a second year showed a yield of thirty bushels to the acre; by a still further addition, the third exhibited the still greater yield of fifty bushels to the acre—doubling the crop in three years; and now the same land will yield from fifty to sixty bushels of wheat to the acre.

When this is taken into consideration in connexion with another fact, that wheat can be raised in great abundance upon the shores of the Baltic, and sent to England, and there sold at a cheaper rate than the average price of wheat per bushel at the port of New York; and that they have just commenced raising that grain upon an extensive scale in that region, and are increasing the quantity produced every year by the further occupation of land for that purpose—let me inquire of any thinking man, what reasonable prospect we have of supplying Great Britain with breadstuffs, unless subject to the duties of her present corn laws? none whatever. It may be, that until their increased growth of wheat will become sufficient for all their wants, they will receive our flour and grain through the Canadas, as Canadian flour and grain, but in no other way; and not even in that indirect method as soon as their object is attained. When they arrive at that point, at which they are now aiming, a heavy duty will be imposed in the Canadas, upon all the breadstuffs coming from the United States. And now they receive them, in that manner, in preference to grain from the Baltic, not from any friendship to this country, but to carry out a portion of their settled policy, by advancing the interest of their countrymen in the Canadas over that of foreigners.

The only reasonable prospect of guarding against this contingency, and of securing to our farmers, at all times, a fair price for their produce, will be to make *a home market for them*, by permanently sustaining such a protective system as will build up our manufacturing establishments. By doing this, we will at once create a certain and fixed market for our southern cotton, and one not subject to the caprices or policy of foreign governments, which may be, and frequently are, at variance with our interests; we will also form a steady market for all the surplus breadstuffs of our Western States; for that great number of manufacturers must live, and they cannot till the land or raise cotton for themselves. We, at the same time, give continued employ, at fair remunerating wages, to all the labouring classes and artisans in our country, either in the production of the raw material—the manufacturing it—the producing of the breadstuffs and other provisions for their subsistence, or in the transportation and sale of the various articles which must be continually passing to and fro throughout this extensive country. By such a system, in *our* judgement, we will revive and perpetuate, in a great degree, the prosperity of our country; and by no other can we reasonably hope to effect that great object, which we all have so much at heart.

Although it is true, that since the time when the first eight bales of United States cotton was seized by the Custom House officers in the port of Liverpool, in 1789, as not being the growth of this country, that article of commerce has been produced in an increased ratio, almost unparalleled in the annals of the world; yet our population has increased with equal rapidity; and if our countrymen could be induced to see the justice, as well as the value, of using their own labour in their own land for manufacturing it; and thus consume our flour and other products, without being compelled to look abroad for a vent for our surplus, the time would soon be at hand when most of this cotton raised in the land would be manufactured and consumed within our own borders; thus rendering us truly independent as a nation.

We have thus shown how the cotton planters at the South, and the grain growers at the West, and in the Middle States, are directly and vitally interested in sustaining the protective tariff, and by that system establishing a certain and steady market for all they can raise within these United States. We will now proceed to show what has been the experience of other nations on this very question, and how analogous their situation has been to ours; and that they only obtained permanent relief by abandoning the projects commended to their favourable notice by the statesmen and manufacturers of Great Britain, and by adopting a protective tariff policy.

This matter does not rest upon opinion, or upon any arguments which we or any other person can adduce, but it is proved and firmly established by the actual and sore-felt experience of nations in our own age. We have seen that the prosperous condition of England is to be attributed, under Providence, to her steady adherence to the system of a protective tariff; and now have a view of the sad experience of such other nations as have been induced by her representations to pursue the course of policy which she is at present urging upon us for our adoption.

Russia, in 1818, embraced the free trade system, so much eulogized by the English writers, *for all countries but their own;* and the Russian Prime Minister, Count Nesselrode, in 1830, affords us a view of its effects upon that country. He says: "It is with the most lively feelings of regret, we acknowledge it is our own proper experience which enables us to trace the following picture. The evils which it details, have been realized in Russia and Poland, since the conclusion of the Act of 7–19 December, 1818—*Agriculture without a market, industry without protection, languish and decline. Specie is exported, and the most solid commercial houses are shaken.* The public prosperity would soon feel the wound inflicted on private fortunes, if new regulations did not promptly change the actual state of affairs." The Count here shows the intimate connexion between the people and the government; and that the former cannot be ruined for want of the necessary and proper protection to their industry, without the latter feeling great distress. And it is not a little singular that this truly Democratic principle should be fully recognized under the most despotic monarchy on the face of the earth, and yet be questioned by many, or at least not acted upon, in the model Republic!

A person would almost suppose that he was here describing the condition of the United States, for some five or six years anterior to the enactment of the present tariff. Such must inevitably be the situation of every country which is so foolish as to adopt the free trade policy recommended by Great Britain. For so long as a prohibitory system is maintained by that government, and by others in Europe, "the State (to use the language of the Russian Prime Minister) which pursues a contrary system, makes, from day to day, sacrifices more extensive and more considerable. It offers continual encouragement to the manufactures of other countries, and its own manufactures perish in the struggle which they are not able to maintain against the united encouragement afforded to their foreign competitors by the bounties of their own government, and by the low duties of the country to which they thus export."

Germany presents another prominent instance of this national experience. That country, now by means of her protective tariff, known as the *Zollverein*, or Commercial Union, is in a prosperous condition. But "there was a period (says the Allgemeine Zeitung, in describing this Union and its beneficial effects), when the consumption of English manufactures was in Germany four times greater than in her much boasted Indian Empire; and yet the monopolizing islanders would not allow us poor Germans the advantages they concede to their subject Hindoos, of paying for the manufactures we need in agricultural produce." "England, not content with having ruined the greater part of the German manufacturers, and with having overwhelmed us with immense quantities of woollen and cotton goods, and colonial produce, repelled from her shores our corn and timber, and occasionally even our wool." "In vain did the Germans debase themselves until they became hewers of wood and drawers of water for the proud Britains; they were used worse than a subjugated people."

The statesmen of Germany opened their eyes to the depressed and ruined condition of their country; and the result was the adoption of a protective tariff system. So soon as this project was started, the English amused them with the same strain of music, so often played for our edification. They were assured, over and over again, that they would be entirely ruined by such a tariff; that a protecting duty enhanced, to the amount of such duty, the price of the home manufactured articles to the consumer; and that their depressed condition did not result from the state of trade between them and Great Britain. The Germans, however, placed no faith in these assertions, and fully established their protective system. And what has been the result? Let the Germans speak for themselves. The same periodical above referred to, in examining the question, observes:

"Well, then, has our agriculture suffered any detriment from the high tariff? Quite the contrary. It has gained—a ten-fold gain—during the last ten years. The demand for agricultural produce has increased, and the prices have everywhere risen. It is notorious, too, that in consequence of the prosperity of our home manufactures, the value of landed property has every-where experienced an increase of from 50 to 100 per cent. Daily labour is every-where better paid, and at all points improved means of conveyance are in progress to completion or projected."

This is certainly a beautiful picture of the prosperity necessarily following the adoption of a protective system, and it is no more beautiful than true; and the same effects will follow in every other country which has the wisdom to give such a system a firm and permanent basis, not subject to the fluctuations of party politics. But, notwithstanding all these advantages, the British statesmen and their agents had the address to inculcate into the minds of some of the leading men in Germany, as they have also into the minds of many in these United States—that a protective tariff system should not be firmly established; but that they, and we, should rather continue to look for a repeal or modification of the English corn laws—on that subject, however, some of the Germans seem to have had very correct ideas, soon after the establishment of their tariff. That valuable periodical, which *we* have already made use of in this matter, justly observes on this point,—that since the establishment of the *Zollverein*, they had arrived at a clearer insight of what is really meant in England by the term "free trade;" for since that time, as Dr. Bowring himself says, referring to the Doctor's Report on the German Commercial Union, "the *Zollverein* has brought the sentiment of German nationality out of the regions of hope and fancy, into those of the positive and material interests." "The Report is right in this behalf, that knowledge is widely spread among the Germans. It is precisely for that reason that in Germany people have ceased to indulge in cosmopolite dreams; they recollect their Faust—they trust to their own judgement, to their own experience, to their own sound common sense, rather than to faulty systems in contradiction of all experience—they begin to comprehend why Burke confidentially warned Adam Smith that countries were not to be governed according to cosmopolite views, but by knowledge founded on searching investigations of their peculiar national interests; they distrust counsellors who blow hot and cold with the same breath; they very well know how to estimate the value as well as the advice of manufacturing competitors; in a word, whenever there is any question about *offers* from England, they recollect the well known caution, and say—"We distrust the Greeks, even when bringing *presents*."

We have quoted this somewhat at length, because it is entirely applicable to our own situation; and we most sincerely trust, that it may be said of us, as it is of the Germans, that we trust to our own judgement, to our own experience, and to our own sound common sense, and that we will no longer suffer ourselves to be hoodwinked and misled by the interested and false system of policy urged upon us by Great Britain.

That we are correct in attributing the fluctuations in our protective policy to the operations of the British system, will be evident to any one who will take the labour to read the articles on this subject, prepared in Great Britain, and intended for circulation in this country; they will there see all the arguments which are here advanced against our tariff policy, and in favour of looking to the imaginary blessings of free trade for our advancement in prosperity. We will give one extract from the Dublin University Magazine for November, 1843, a high tory periodical, in which our anti-tariff friends will see some of their most plausible arguments prepared to their hands by the tory party of Great Britain. The writer is declaiming against the evils of the protective tariff in the United States, and in favour of *free trade as applicable to us*, although so far as Great Britain is concerned, there is not a periodical in the United Kingdoms more strenuous in upholding the policy of protecting their own manufactures, to the exclusion of all foreign competition, than this same Dublin University Magazine. The writer proceeds to say: "Possessed, as America is, of boundless tracts of fertile and uncultivated land, the policy of her seeking to become a manufacturing power may be doubted. The consequences which her tariff laws produced, were near proving fatal to her strength and happiness. The Northern States received from them a problematical benefit; but to the Southern States they were a severe evil, unmitigated by a single advantage. To the latter States they doubled the price of articles of the first necessity; while, at the same time, they depreciated the value of Southern produce."

This is a fair specimen of the impudence of the writers of our great manufacturing rival, and hence it is that the arguments against the tariff, by reason of its alleged depreciating the price of cotton, have been drawn. The time is fast approaching when such statements from such a source will cease to have any effect in our country; the policy from whence they originate only requires to be known to be universally abhorred and rejected. Its character has been well developed by Dr. Madden, in his Travels in Egypt and Syria—an Englishman, sufficiently bigotted in favour of his own country, to regard her institutions as the best in the world. He, speaking of Egypt, and the expulsion of the French from that region, "because they might have proved troublesome neighbours to us (the English) in India," observes: "The interests of commerce have ever been opposed in England to the dissemination of knowledge and civilization in the East. We dare not enlighten our East Indian subjects, much less our West Indian slaves; how, then, could we tolerate the diffusion of that knowledge which constitutes power in the vicinity of our possessions?"

This is the course which Great Britain has pursued, and is pursuing, with all the world. She circulates, at a great expense, throughout our land, doctrines and principles which she knows to be untrue, and which she is aware, if acted upon, must be destructive to our happiness as a people, and to our existence as a nation. Yet no matter who is ruined, so long as she prospers, this course will be adhered to by her statesmen. This is becoming well understood in France, Germany, and Prussia, and even among the more observing in Italy; and it has induced such men as Goethe, Chateaubriand, and Visconte, to remark, when speaking to intelligent Englishmen, "Oh, sir, your institutions are most admirable, your countrymen most industrious, your merchants enterprising, your wealth unbounded, your power very great; but your foreign policy has ever been most detestable."

Shall it be left to the Americans to be the last among the intelligent of the earth to discover the ruinous character, to them, of the foreign policy of the British nation? There are some among our countrymen who still profess to believe that the British Parliament will so far modify their corn laws as to admit the importation of breadstuffs from the United States, if we will abandon our protective tariff. That this question may be set at rest, we refer to the speech of Sir Robert Peel in the British House of Commons, in May, 1843, upon the motion of Mr. Villiers for a repeal of those corn laws; in which he entirely sustains and advocates the British system, and that motion was rejected by a majority of one hundred and ninety-six votes! Those who have flattered themselves that the British ministry were prepared to go, in some modified form, for *free trade*, will not fail to perceive the horror expressed by Sir R. Peel of the consequence of abandoning "*the principle of protection*;" and they will also see, by that most decisive vote, that the House of Commons agree with him in sentiment. As to the House of Peers, there cannot be a question, that they are more thoroughly opposed, from interest, to any kind of free trade than even the Commons. The Duke of Wellington, in his speech which we have previously mentioned, expressed the sentiments of a large majority of that House. So then, unless we are determined to be infatuated, we must see that Great Britain does not intend, under any possible state of circumstances, to abandon the full and entire protection of her own *agriculture*, and her own *manufactures*. Why then should we for one moment hesitate about most *effectually* protecting ours?

We can readily believe that if we had not adopted our tariff, and if there was not a pretty certain prospect that Germany will adhere to her protective system, we would never have witnessed such a vote in the House of Commons. There would have been many speeches made on the propriety and justice of some indefinite kind of modification of the corn laws; and then the subject would have received the go-by. Nothing was to be gained by such a course now, and, therefore, they came out and avowed their policy.

This policy, *to produce the raw material in her own colonies, and to manufacture it at home*, and to give the preference in all cases to her own subjects, has been the settled policy of Great Britain for ages, and must still continue to be so unless she is willing to be ruined. If, indeed, it was a matter of choice with her whether she would adhere to that policy or not, but she has really no choice to exercise, what reason have we to expect that she will depart from her old and well settled system in our favour? Is it because we are her rivals for the trade of the world, and the most dangerous rival she has? Is it because we manufacture better and sell cheaper in China and South America than she can, so that she is enforced to counterfeit our marks and stamps in order to meet with a market in those countries? Is it because we undersell her in many articles even in her own colonies?

All these matters, true as they are, will naturally serve to render her more rigorous against us than against any other nation. The only true reason why there are any to be found in our country who yet believe that we may exist as a prosperous and independent nation, under a free trade system, while the other nations of the world pursue, and must of necessity always pursue, a protective policy, is because, in the language of Holy Scripture, our people "perish for lack of knowledge."

This was not always the case even in our own country—there was a period, before this true policy of our people was unfortunately connected with politics, when the large mass of our population was in favour of it. The Address of the Tammany Society to its absent members, and the members of its several branches throughout the United States, 8vo., New York, 1819, p. 15, after speaking of the evils arising from "the inundation of the country by foreign goods," observes, "the remedy for all this is one most grateful to the American ear, and nearest to the American heart. It is the encouragement of our own manufactures." This noble and patriotic address then proceeds, on page 17, to show that the southern States would be materially benefited by the adoption of the protective system. This was also the principle held by the Democratic party from that period up to the commencement of the present century, and enforced by their writers by many powerful arguments, and numerous statistical tables, as will appear by reference to Thomas Cooper's "Political Essays," 8vo., Philadelphia, 1800.

The utility of this system to our country does not depend upon argument, but is sustained by years of experience; and we have also had a taste of the opposite or free trade system, in the dreadful distress which pervaded our country in the spring and summer of 1842. Just before the passage of the present tariff, in August, 1842, there were forty thousand unemployed persons in the State of Pennsylvania alone; and at the same time, full ten thousand of the industrious classes, in the city of Philadelphia, were vainly endeavouring to earn the means by which to buy their bread. The present tariff law saved thousands from starvation, and the blessings of those who were in want, and ready to perish, sanctifies it as one of the most righteous and glorious measures of a government, founded for the good of the people. Let us, therefore, not trifle with the happiness and prosperity of our whole people. On abstract questions we may dispute as much as we please; but on one like the present, where experience has shown us that misery, distress, and want, inevitably attends the adoption of any thing like free trade, under the present situation of the world, let us not cast away from us the blessings which Heaven has bestowed upon our land, through the medium of a law which has afforded labour at remunerating wages to all classes, lest we become unworthy of the privileges and advantages we have heretofore enjoyed.

THE GERMAN ZOLLVEREIN.

The following detailed account of the German Zollverein, and the manner in which it operates, we deem to be of great importance. It is taken from a recent British periodical, as will be manifest from the manner in which it is commented upon, showing that it levies very high duties upon many of their manufactures, while it amounts to a total prohibition upon several others.

Its great moment to us, is the decided proof it offers, that the thirteen German States, with a population of 27,500,000 included in this league, are fully alive to the necessity of protecting, and do protect, by duties varying from twenty to upwards of one hundred per cent., the manufactures in which they are engaged; and that the same outcry is raised against this, on the part of Great Britain, that is kept up against this country, and all others, who will not consent to frame their revenue laws, in a manner to suppress their own industry, and stimulate that of England.

It is further very important, it should be generally known here, that notwithstanding, as stated in the annexed article, that the *Zollverein* publicly adopted the Prussian tariff, the basis of which was not to exceed from 10 to 15 per cent. at most, yet, so far from adhering to this, the duties actually levied, amount, as we have said, to from 20 to upwards of 100 per cent., and in some cases to total prohibition.

We offer this, as undeniable proof, from British authority, that the modern doctrines of the so called "free trade," find no favour in Germany, so far as the commercial league of the *Zollverein* is concerned.

It is our intention in our future numbers further to show, that free trade has no existence, in any country, except where all other things are equal, as is the case in the several German States who have united under the *Zollverein* league, for no other purpose, but the better *to protect, through proper duties, and other regulations, common to them all, their rising manufactures.*—Editor.

The German Customs-Union, (*Deutsche Zollverein*,) is an association of states, having for its declared object to secure freedom of trade and commerce between the contracting states, and a common interest in the customs revenue. The terms of the Union are expressed in the treaty between Prussia and the other states, dated 22d March, 1833, which may be regarded as the basis of the association.

The states now constituting the union are Prussia, Bavaria, Wurtemberg, Saxony, Hesse-Cassel, Hesse-Darmstadt, Baden, Nassau, the Thuringian states, Frankfort, Brunswick, Lippe-Schaumburg, and Luxemburg. The population of these, with the exception of the three last-mentioned states, was, in 1839—26,858,886. Including these three states, which have since joined the union, the present population cannot be less than twenty-seven millions and a half. The German powers which have not joined the union are Austria, with twelve millions of German subjects, and Hanover, Oldenburg, Holstein, the two Mecklenburgs, and the Hanse Towns, whose united population is about three millions more. The inhabitants of Germany are, therefore, divided in the proportions of twenty-seven and a half within, to fifteen without, the sphere of the *Zollverein*.

The treaty provides, in the thirty-eighth article, for the admission of other German states, and the thirty-ninth article for the making of treaties with foreign states, but these latter are not admissible into the union. "There is a general misunderstanding abroad," says Dr. Bowring, "as to the necessary conditions for forming a part of the commercial confederation; and countries have been spoken of, such as Holland, Belgium, Switzerland, and even France, as being disposed to form a part of this great league, and being engaged in negotiations for this purpose. But by its fundamental organization no states but those of Germany can be admitted into the league." Therefore, it is in his capacity of Grand Duke of Luxemburg only that the King of the Netherlands is a member of the union; and in the same way the King of Denmark could only join it as Duke of Holstein, and not in respect of his Danish dominions.

The *declared* principle of the league—namely, the commercial and financial union of the German states—is not only one to which no foreign power has any right to object, but is excellent in itself; and is, in fact, the establishment of free trade among the associated states. The numerous custom-houses, which impeded the internal traffic of Germany, have been abolished; an enormous expense previously incurred in the prevention of smuggling has been saved; and smuggling itself, with all its immoral consequences, has, so far, been put a stop to. The traveller passes without interruption from the frontiers of France to those of Russia; from Switzerland to the North Sea. The free interchange of commodities promotes, as a natural consequence, the improvement of communications, the interchange of ideas, and the diffusion of knowledge. The roads are amended, railways are constructed, the rivers are opened to steam navigation. No one can deny that the *Zollverein* has thus removed many impediments in the way of general civilization and comfort, and has, in so far, been highly beneficial to the German people.

But it is not merely to its *avowed* principle that the league owes its successful accomplishment. There are other motives which have entered largely into the causes of its existence. In the first place, it has given practical effect to that vehement desire for national unity which so generally pervades the German mind. It is in entire accordance with true German feeling, which aspires, beyond all things, at making the "fatherland" an undivided nation. Then, it so happened that this general desire for union fell in exactly with the policy of Prussia—a power which has not failed to seize so favourable an opportunity of extending her political influence, and occupying a position which, though of nominal equality, has in reality secured her predominance among the German states. To these inducements we regret to be obliged to add another—namely, the prevalent opinion in Germany that their manufacturing industry ought to be protected against foreign competition, and that the tariff of the *Zollverein* ought to be used as an instrument for the exclusion of foreign manufactures from the German market.

The necessity of union against foreign aggression was a lesson which France could hardly have failed to impress upon the Germans during the last war. Fatal experience had taught alike governments and people, that the future safety of Germany, and its preservation from a recurrence of those calamitous devastations which the war had brought upon it, depended upon the various states being bound by the ties of mutual interest. Although the Congress of Vienna had established a new Germanic confederation, (*Deutsche Bund*,) and a federative diet charged with the maintenance of peace at home and abroad, yet it was soon perceived and felt, that the kind of union obtained by means of this confederation was more formal than real. The German empire, with all its venerable laws and privileges, had been destroyed; the charm of ancient institutions was broken; men did not transfer to the assembly of delegates at Frakfort that reverence which they had been accustomed to pay to the successors of the Cæsars, and to the electors of the empire. The late King of Prussia was one of the first to perceive, that, in order to unite Germany in reality, something more cogent than the federative diet was indispensable. He found his own power rather weakened than strengthened by the addition of the Rhenish provinces, so long as they remained separated, not only by distance, but by the customs-barriers of intervening states, from his ancient territories. He accordingly effected, in 1829, a convention with those states, by which he became the farmer of their customs-revenues, and so removed the barriers between Eastern and Western Prussia. Some years, however, previous to this, the Prussian Government had deemed it expedient to comply with the demands of the manufacturers, especially those in the Rhenish provinces, for protection against foreign goods, which, since the peace, had begun to make their appearance; and on the 26th May, 1818, a new Prussian tariff had been issued, which was designed to afford a moderate protection to the home industry, and which may be regarded as the groundwork of the present tariff of the *Zollverein*.

The professed intention of this tariff of 1818, was to establish ten per cent. as the maximum of protection; and this was officially notified by the Prussian Government to that of Great Britain, in the year 1825. Accordingly, Mr. Huskisson stated to the House of Commons, on the 7th May, 1827, that the Prussian duties on the internal consumption of British goods were very low—fluctuating from 5 to 10 per cent., and upon no article exceeding 15 per cent. It turned out, however, that the degree of protection afforded by this tariff, ranged in fact from 20 to more than 100 per cent. upon the value, and although it was improved in some particulars by another tariff issued in 1822, yet the protecting duties were not thereby materially reduced.

But the proceedings of Prussia were considered in a hostile light by the manufacturers of the South. They formed a counteracting association, in 1819, which numbered from five to six thousand members, had its head-quarters in Nuremberg, and agents in all the principal towns, and published a weekly newspaper, devoted to the cause. They addressed the Diet, the German Courts, and the Congress at Vienna, in 1820, in favor of a general customs-union. They so far succeeded, that, in 1826, the small Thuringian states, occupying the central portion of Germany, with one or two others, formed themselves into a customs-union, under the name of the *Mittel-Verein;* and, within the two succeeding years, a more important union was accomplished, consisting of Bavaria and Wurtemburg, with their small enclosed states; the tariff of which union is stated to have been as high, or very nearly so, as that of Prussia. Thus, Germany contained three separate customs-associations, with separate tariffs, and it became obviously desirable to unite these conflicting interests. Prussia made overtures to the other unions, but was for a long time unsuccessful; they objecting principally to the high scale of Prussian duties on colonial produce. At last, however, all obstacles were removed, principally, as Dr. List states, through the exertions of Baron Von Cotta, the eminent publisher and proprietor of the *Allgemeine Zeitung*, and on the 22d March, 1833, the treaty was signed, by which, for the first time, Germany was knit together, in any thing like a binding national confederation. Between that date and the present, the league has been enlarged by the accession of other states; but, as we have already mentioned, Hanover and some other northern states, have hitherto refused to join it. Hanover formed a distinct union with three neighbouring states, viz.: Brunswick, Lippe-Schaumburg, and Oldenburg, which assumed the title of the North-western League; but the two former having subsequently seceded from it, and joined the *Zollverein*, the North-western League has been reduced to Hanover and Oldenburg only. The Hanse Towns, Mecklenburgh, and Holstein, are not yet members of any customs-union.

The revenues of the *Zollverein* are divided among the contracting states, according to the population of each state respectively. But no community is allowed any thing in respect of the charges of management, and of collecting the duties. Consequently, as a general rule, each state defrays the expense of its own customs-establishments. This is a great advantage to those territories which, from their geographical position, have no customs-frontier, and consequently no custom-houses or guards to maintain. All the states, except Prussia, receive a larger amount of revenue than formerly, with a diminished expense of collection. But Prussia, on account of her extensive frontier, sacrifices annually, a large amount of money for the benefit of other states, receiving no more than the ordinary proportion of revenue, of which her share amounts to about fifty-four per cent. The moderation of Prussia has been conspicuous, not only in this sacrifice, but in contenting herself with one vote only in the congress of delegates, like each of the smaller states. She has, however, compensated herself for these sacrifices by the addition which she has undoubtedly made to her political power.

Having thus traced the outline of the history of the *Zollverein*, we come to the point which most concerns Great Britain as a manufacturing nation, viz.: the tariff of duties which it enforces. By some this has been supposed to be framed in direct hostility to British interests, and that in combination with other foreign powers; by others it has been described as a movement in the direction of free trade, being far more liberal than the older Prussian tariffs. We shall show that the rates of duty upon the leading articles of British export to Germany are very much higher than the British Government was led to suppose they would be; and further, that there is reason to believe that those rates will rather be increased than diminished. We do not wish to be alarmists; on the contrary, we refer with gratification to the fact that, in spite of all obstacles, British exports to Germany have for some years past been, upon the the whole, on the increase. But, if the manufacturing power of Germany is increasing still more rapidly, and the tendency of the *Zollverein* is aiming more and more at the entire occupation of the home market, without regard to its foreign commerce, we do not see very well how, under circumstances so unfavourable, our trade with Germany can be permanently maintained, to its present, or to any considerable extent.

The *Zollverein* tariff classes its import duties under forty-three different heads. They are levied by weight—generally by the centner, or cwt.* Raw produce, including the raw materials used in manufactures, are for the most part admitted free. The principle of collecting the duty by weight is simple, and prevents fraud or mistake in the ascertainment of value; but it is open to the objection of falling too heavily upon the coarser and cheaper, in comparison with the finer and more costly kinds of goods. This mode of levying the duty upon manufactured goods constitutes in fact one of the main objections to the tariff. "The rates of duty," says Mr. Macgregor, "are certainly not to be defended: they are unjust, as not bearing a relative proportion to the value of the articles upon which the duties are imposed. They levy the same duties on 100 lbs. of coarse unbleached calicoes, as upon the same weight of the finest sheeting and cambrics; and on 100 lbs. of the coarsest woollen flannels and blankets, as on an equal weight of the finest kerseymeres and broad cloths; the duties on woven goods, instead of being, as promulgated publicly, at from 10 to 15 per cent. on the value, range from 10 to 95 per cent. on the value." It thus appears that the mode of charging the duty by weight, has enabled the *Zollverein* to advance very greatly upon the originally declared maximum of ten per cent.—so much so as to increase that rate tenfold upon the cheaper kinds of manufactured stuffs. Dr. Bowring reports that "the commercial league itself professed to make the Prussian tariff the basis of the legislation of the union; and the maximum intended to be established by the Prussian tariff was an *ad valorem* 10 per cent. on the manufactures; for that tariff provides that "*the duty on consumption of foreign fabrics and manufactured goods shall not exceed* 10 *per cent., and shall be less wherever a smaller duty can be imposed without injury to the national industry.*" But the duties levied—being, on cotton manufactures, £7 10*s*. per cwt.; on woollens, £4 10*s*.; on hardwares,

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* Equal to 100½ lbs., or 113½ lbs. English.

£8 5*s.*; on common linens, £1 13*s.*; on fine linens, £3 6*s.*; and on silks, £16 10*s.* per cwt., do, on the whole, greatly exceed the proposed ten per cent. The system of imposing the duty by weight has the advantage of great simplicity, but it acts in complete hostility to the *ad valorem* principle—as the duty increases, instead of diminishing, with the lowness and coarseness of the article; so that the operation of the tariff is as complete an exclusion of every low-priced manufacture, as if it were absolutely prohibited. Under the influence of this state of things, the duty on cotton goods varies from 3 1-2 to 120 per cent." We think the British Government fully justified in complaining of the exclusion of British manufactures by the operation of the tariff in the manner described. For it is clear that the *Zollverein* did publicly adopt the previously existing Prussian tariff as the basis of the Union tariff of 1833, and the Prussian Government had formally pledged itself to a maximum of 10, or at the utmost 15 per cent. On the 25th December, 1825, Baron Maltzahn, then the Prussian minister in London, wrote thus to Mr. Canning respecting the tariff:—"The principal object of the duties of import levied on foreign produce is the increase of the revenues of the state; and it is with reference to this consideration that they have been specified. It follows from hence that no one of these duties is sufficiently high to prevent the importation of foreign produce, as is proved by the very extensive sale which it has in all parts of the monarchy. "*The duties levied on the productions of foreign make, or manufacture, are generally only* 10 *per cent. ad valorem; some amount to* 15 *per cent.; there are some which are more moderate.*"[*] We are not aware upon what ground the Prussian Government may have attempted to explain the inconsistency which is so very apparent in this proceeding; but as it stands before us, it is plain that Baron Maltzahn either misapprehended, or misrepresented, the character of a tariff upon which he was founding a claim for reciprocity from the Government of Britain.

The most important branches of our export trade to Germany are, beyond all comparison, our cotton and woollen manufactures. Their united value constitutes no less than nine-elevenths of the value of the entire exports. For example, in the year 1841, the total declared value of British produce and manufactures exported to Germany direct, inclusive of Prussia, but exclusive of what passed through Holland and Belgium, was, according to the official tables, - - - - - - - - - £6,017,854

From this we separate the declared value of the manufactures of plain and printed cottons, hosiery, and small wares, - - - - - - - - - - - - - - -	£1,129,944
Do. of cotton twist and yarn, - - - - - - - - - - -	2,406,936
Do. of woollen manufactures, including yarn, - - - -	884,541
Total, - - - - - - - - - - -	£4,421,431

That the rates of duty on these two staple articles should be moderate, is, therefore, of paramount consequence to British interests. We will state what they are.

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[*] Communications relative to the commercial relations between Great Britain and Prussia, presented to the House of Commons, July, 1839.

Articles.	Zollverein duty per centner. £	s.	d.
Cotton manufactures of all kinds,	7	10	0
Cotton twist unbleached,	0	6	0
Do. bleached, or dyed,	0	18	0
Woollen manufactures in general,	4	10	0
Do. carpets,	3	0	0
Do. yarn, three or more fold twisted,	1	4	0
Do. do. single and double,	0	1	6

The duty upon cotton manufactures is not only unequal, but upon the whole, unreasonably high. According to an estimate, cited by Dr. Bowring, this duty, when calculated *ad valorem*, upon jacconets, cambrics, prints, velveteens, velvets, nankeens, beaverteens, shirtings, printers, and domestics, ranges from 38 1-2 to 118 per cent. By another authoritative estimate, it appears, that the duty on coarse shirting, worth 4d. per yard, is equivalent to 90 per cent.; upon superior shirting, worth 1s. per yard, 32 1-2 per cent.; upon printed cottons, worth 1s. 6d. per yard, 15 3-4 per cent.; and upon fine printed cottons, worth 2s. 6d. per yard, 8 3-4 per cent.* Making all due allowances for differences of calculation, it still remains clear, that the *Zollverein* duty is prohibitory upon the coarser and cheaper kinds of British cotton manufactures. They have, in fact, ceased to be used in Germany; and when they appear at the fairs of Leipsic, or Frankfort, it is only in transit for exportation. The manufacture of cotton goods has advanced very rapidly, both in Saxony and Prussia, and it is rising in Wurtemberg, Bavaria, and Baden. The cheapness of the necessaries of life, the moderate wages of labour, the economical habits of the people, the general diffusion of education, and the increasing facilities of communication, which have been the gradual, though almost insensible, results of twenty-eight years of peace, are so many causes which would have promoted the success of German industry, without any artificial protection. The mistake which Mr. Gladstone's act of last session has at length corrected, of prohibiting the export of machinery from Great Britain, has, for many years, been the means of supplying continental establishments with British skill and capital for its fabrication, whilst we deprived ourselves of the advantage of supplying it to them. But when, to these favourable circumstances, has been added the exclusion of foreign competition, we cannot wonder that Germany should not only have been able to supply her home market, but should have become a considerable exporter of manufactured cottons. Accordingly, we find that, upon an average of the three years, 1837-8-9, the *Zollverein* states imported only 16,174 centners of such goods, whilst they exported, 87,987 centners, making the excess of exports over imports, 71,813 centners; so that the exports of cottons from these States is more than equal in quantity to that of France, and amounts to almost one-sixth of that of Great Britain. With respect to the home consumption of the *Zollverein* states, it appears that the quantity of cotton twist used within them at the period referred to, was 50,886,970 lbs.—a quantity which, deducting 25 per cent. loss, yielded 38,150,225 lbs. of manufactured goods. Taking from this the 71,813 centners excess of exports, equal to 7,899,430 lbs., we have left for home consumption, 30,250,798 lbs.; being in the ratio of 1 1-7 lb. per head of the then population of the union—an amount evidently admitting of further extension, and not being, we believe, more than half of the quantity used in England. In this state of things, it is not surprising that the British exports of cotton goods to Germany should have decreased with reference to the population. The ratio of this comparative decrease may be thus estimated:

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* Communication of a mercantile house, quoted in the supplement to Mr. M'Culloch's most valuable Commercial Dictionary.

Cotton Manufactures Exported.

Years.	Quantity.		Declared Value.*
1831,	41,522,072	yards.	£1,146,068
1832,	51,479,811	“	1,499,432
1840,	45,768,127	“	1,100,792
1841,	48,755,656	“	1,129,944

The decrease appears to have been principally in British printed cottons, which will probably soon cease to be used at all within the *Zollverein* limits. It should be observed also, that a larger proportion both of the cottons and woollens imported into Germany, appear at the fairs in transit only, and are afterwards passed, principally by smuggling, into Russia, Austria, and other countries. So that with respect to British woven cottons, the conclusion is, that the actual consumption in Germany is now very small indeed, and that, small as it is, it has been gradually diminishing.

The consumption of British cotton twist has, however, been largely augmented. Our exports of this article to Germany direct were:—

Years.	Quantity.		Value.
1831,	20,454,890	lbs.	£1,197,274
1832,	29,975,668	“	1,798,988
1840,	41,765,508	“	2,451,299
1841,	41,089,710	“	2,406,936

We find that, at present, about two-thirds of the twist consumed within the *Zollverein* states is imported from foreign countries; and certainly we cannot complain of the actual duty of 6s. per cwt. upon cotton yarn unbleached. It is, no doubt, moderate; and the consideration which has hitherto secured its remaining so, has been the utter inability of the German spinning establishments to supply the demand for twist, or even one-half of it. The inferiority of the German to the British spinneries is such, that this inability must necessarily continue for many years to come; and it is obvious, that if the price of twist and yarn were in the mean time to be artificially raised, the effect would be most injurious to the sale of manufactured goods, for which the twist is a necessary material. Dr. Bowring's Report, of 1839, says: "hitherto the majority of opinions have opposed the elevation of the duty on twist; but the demands for protection have been strengthened from year to year; and, though nothing would seem so obvious, on a comparison of the arguments for and against an elevation of the duty on cotton-twist, than that such an elevation would be eminently pernicious to the manufacturing and commercial interests of Germany, I see every reason to anticipate, that the interest which demands the exclusion of the foreign article, may ultimately succeed, unless a better direction be given to commercial legislation generally, so as to induce labour and capital to look to free communication and enlarged intercourse with other nations, and not to a protected home-market alone, as the best field of encouragement." Subsequent experience has, we regret to say, confirmed the accuracy of Dr. Bowring's prediction. The cotton-spinners have been every year more and more clamorous for increased protection. They are strongly supported by public opinion, particularly in southern Germany, and we shall be much surprised if they do not ultimately force the *Zollverein* Congress to accede to their demands. They nearly succeeded, at Stutgard, in 1842, where it was proposed to raise the duty from 6s. to 18s., (or six dollars) per cwt. The question was, however, postponed; but the manufacturers did not abate their efforts, and their demands were renewed, at the Congress, held at Berlin, in the autumn of 1843. Some demanded a duty of four, others of five, others of six dollars, subject to a drawback on the exportation of the manufactured article—a condition, which discloses plainly enough, the effect that the increased duty must, at all events, have upon the sale of woven goods. According to our latest information, the forbearance of Prussia and Bavaria has again prevented the adoption of the spinners' demands, and the congress has once more deferred the subject. But we must caution our countrymen, engaged in this branch of manufacture, not to place any reliance upon the ultimate predominance of moderate views in the councils of the *Zollverein*. We have, at various times, taken pains to ascertain, by careful inquiries, the state of public opinion in Germany, with regard to this question; and our conviction is, that an increase of the duty on twist will, before very long, be carried in the Congress. We do not, indeed, believe it possible for any measure of this kind to check at once, or otherwise than very gradually, the importation of twist and yarn from England; but when we see the protective principle becoming so popular, and so rapidly advancing towards its application to half-manufactured articles, we cannot but look with anxiety to the means of preserving this great market for the most important branch of the exports which now reach it from this country.

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* This includes the value of hosiery and small wares, of which the official tables do not give the quantity.

Woollen manufactures, although not protected to the extent of those of cotton, are still heavily taxed on importation into the *Zollverein*. The average rate of duty very much exceeds the 10 per cent. held out by the Prussian Government; it ranges, in fact, from 20 to 50 per cent. Notwithstanding, British woollens have maintained their ground well, and the exports of woollen yarn, to Germany direct, have very much increased, as the following returns will show:—

Value of Woollens exported to Germany.

Years.	Manufactures.	Yarns.
1831	£425,384	£62,259
1832	817,346	130,189
1840	752,227	245,813
1841	884,541	291,656

The low duty of 1s. 6d. per cwt. upon foreign yarn has, no doubt, contributed very much to the prosperity of the home manufacture of wollen stuffs and cloths, which is thriving in most of the *Zollverein* States. They already export, to a considerable amount; for it appears that the average exportation of woollens, in the three years, 1837-8-9, was 69,274 centners, and the average excess of exports over imports, in the same years, was 43,463 centners. It is impossible, therefore, to predict with confidence the permanent preservation of this market for British woollens.

And we regret to remark that, at the Stutgard Congress of 1842, the *Zollverein* took a very decided step in the direction of excluding Yorkshire and Lancashire goods; by laying an additional duty of 40 per cent. on mixed stuffs of woollen and cotton: such as *mousselines de laine*, &c., on which the duty has been raised from £4 10s. to £7 10s. per centner. The object of this proceeding was to force, prematurely, the increase of the fabrics of Prussia and Saxony; and, we fear, it is but too significant of the spirit which, we have said, is becoming more and more powerful in the *Zollverein* councils.

We have adverted to those branches of British exports which are of the greatest magnitude. There is, however, another, next in importance, though inferior in value, which requires some notice—viz.: the iron manufacture. The declared value of this branch of our export trade to Germany direct, is thus officially stated:

Years.	Iron and Steel, wrought and unwrought.	Cutlery and Hardware.
1831	£53,459	£57,418
1832	71,166	78,129
1840	184,018	97,454
1841	340,259	103,188

The duties on hardware, ranging about 50 per cent. *ad valorem*, appear excessive; but those on iron in its various stages, have hitherto been more moderate, varying from 2 to 10 per cent. *ad valorem*. For instance:—

Hammered iron in bars, or rails and rough cast wares,	pay	3*s*.	per centner.
Hammered iron manufactured for fine drawing, &c.,	pay	9*s*.	do.
Iron and steel plates, wire, sword-blades, &c.,	pay	18*s*.	do.
Fine cast, polished, or mounted steel or iron,	pay	30*s*.	do.

But raw iron of all sorts has hitherto been imported duty free. If any one principle in commercial legislation be clearer than the rest, it is this—that the raw material which feeds the labour and skill of manufacturing industry, ought to be exempt from taxation, unless the public exigencies imperatively require a revenue duty upon it. Hitherto the *Zollverein* has acted upon this principle, in admitting foreign pig iron duty free; but the mining interest has long and strenuously contended for a protecting duty, and we have reason to fear that it has at length succeeded in forcing upon the Zoll Congress the adoption of this pernicious line of policy. At the recent Congress at Berlin it was proposed, that raw or pig iron should be subjected to an import duty of 1*s*. per centner, which at the price of £3 per ton, is equivalent to an *ad valorem* duty of 33 per cent; and further, that the duty upon iron in its next stage—viz. wrought or hammered, in bars or rails, and raw cast, or refined steel, should be raised, from 3*s*. to 4*s*. 6*d*. per centner, being 50 per cent., or, at the price of £5 per ton, from 60 to 90 per cent. *ad valorem*. At the time we write, we are assured that these proposals are expected to be carried, and if so, we can conceive nothing likely to be more injurious to the rightly understood interests of Germany. The quantity of raw iron imported into the *Zollverein* states has risen from 207,203 centners in 1834, to 1,195,925 centners in 1842; and the quantity of wrought or hammered iron from 149,493 to 930,686 centners within the same period.*

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* From official returns.

Enough has been said to show what we may expect from the future legislation of the *Zollverein*. There is no disposition to make any gratuitous concessions to Great Britain, or any other country. The Germans are content to see that, upon the whole, their industry is thriving. We fear there is much truth in Mr. Macgregor's observation—that "if these countries go on progressing, as the Americans say, in manufacturing, with food and all materials, except iron, and coal, and cotton wool, at about half the prices in England and Scotland, British manufacturers must, under the pressure of our existing British corn and provision laws, and of our duties on raw materials, be excluded nearly altogether from Germany; and the demand in America, and other countries, instead of greatly increasing, must greatly diminish."

It is much too late to think of leading them into a new path, against the popular voice and the clamours of numerous class interests, by any arguments, grounded upon abstract principles, however sound, of political economy. The leading statesmen of Prussia declare themselves to be individually opposed to the protective system. Their views differ, as widely as our own, from those of Dr. List and the *Zollvereinsblatt*. But they find it more and more difficult to depart from the course in which Germany has been moving for nearly thirty years; they are every year, more and more, hampered by the pressure of interests which have grown up under legal sanction; and which, as we have shown, are strongly supported by the national sentiment and feeling. We are, therefore, of opinion, that it is impossible for any negotiation which Great Britain might open with the *Zollverein* to succeed, unless upon a basis of mutual reciprocity; that is, *we must be prepared to offer fair equivalents for the concessions we seek*. We must consent to admit the produce of Germany upon easy terms, before we can expect her to deal more favourably with our manufactures. It is undeniable that, ever since the peace, British legislation has been as hostile as it well could be to the interests of Germany. Our tariff has been next to prohibitory, upon the two principal articles of her natural produce—Corn and Timber. England was the country which stood most in need of German corn; she was, in fact, the only country, except Holland, which did want it: by refusing to receive it, she has done her utmost to divert German capital from agriculture to manufactures. By our high duties and our sliding scales, we have made the German corn-trade a most hazardous speculation—a gambling business—depending upon the fluctuations of the barometer in England. The measures of the present Government, although professing to remove prohibitions and reduce duties on raw materials, have, in this respect, done little or nothing for the agriculture of Germany; on the contrary, the practical result of the new corn-law, as regards the importations of 1842, and of 1843, is, that the rates of duty have been actually raised. In 1842, the duty of foreign wheat rose from an average of 5s. 7d. per quarter, under the old law, to 8s. 5d. under the new; on wheat flour, from 2s. to 2s. 11d. per cwt.; on barley, from 4s. 8d. to 8s. 11d.; and on rye, from 3s. 3d. to 7s.*

England has also long maintained enormous differential duties on German timber, making it pay 55s. for every 10s. levied upon the timber of our colonies. The actual amount of duty has been reduced by the tariff of 1842, but the rates on foreign wood still range from at least 50 to 100 per cent. *ad valorem;* and the disproportion between the duty on the foreign and the colonial article is greater than ever—a load of Baltic timber being now charged 25s., and the same quantity of Canada timber only one. Again, we lay very heavy duties on foreign butter and cheese, which, as well as meat and other provisions, are taxed differentially, four times more than the produce of our colonies. We impose also a discriminating duty, equal to from 5 to 10 per cent., on German wool; whilst the wool from our Australian colonies, which is gaining ground rapidly in the English market, is admitted duty free. On several branches of German manufacture, such as linen and silk, our duties are by no means moderate. Those on silk profess to be at the rate of 30 per cent. *ad valorem;* but the customs having the option of charging by weight, the duties are practically raised to 60 and 70 per cent.: the case is the same with respect to mixed velvets of silk and cotton, which are charged in London upwards of 70 per cent. *ad valorem.*

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* Official returns relating to corn, ordered by the House of Commons to be printed, 7th April, 1843.

We regret to find some indications of a retaliatory policy dimly shadowed out in the recent official correspondence between the British Government and that of Prussia. Lord Aberdeen has very properly remonstrated against the restrictive tendencies of the *Zollverein*, and especially against the contemplated new duties on British iron. He was fully justified in so remonstrating, and we think he might have gone further, by recalling to the recollection of the Prussian Government the pledge given to Mr. Canning in 1825, that the maximum of protection did not exceed 10 per cent.; for, if we have any case against the *Zollverein* tariff, it appears to us to rest mainly upon the violation of this official and formal guarantee. But we trust there is no serious intention of executing the threat, that "it may be absolutely necessary for the British Government to *have recourse to retaliatory measures, and even to revise those portions of the new Tariff, framed in a spirit of liberality*, which appears to be so little appreciated."

The high rates of duty on our cotton and woollen stuffs did not originate with the present *Zollverein*. They have been enforced in Germany for nearly thirty years, and, upon some articles, have been lower since, than before, the year 1833. It is true we are threatened with an additional 6s. per cwt. upon cotton-twist, and with a new duty of 1s. per cwt. upon pig iron; it is true, also, that the duty on *mousselins-de-laine* has been lately raised 40 per cent. But it is equally undeniable that we tax foreign wheat, the average price being under 51s., with 20s. per quarter—being at the rate of from 40 to 50 per cent. *ad valorem;* that we tax foreign wool at the rate of from 50 to 100 per cent.; that we tax foreign manufactures of silk, and of mixed silk and cotton, from 60 to 80 per cent. Neither can it be denied that foreign nations have reason to complain of our sliding scales, differential duties, and navigation laws. Upon what ground, then, could the British Government justify itself in raising the actual duties on German produce and manufactures?

Zollverein Tariff.

	£	s.	d.	
Sugar, unrefined,	0	15	0	per centner.
" refined,	1	13	0	do.
Spirits, distilled,	0	2	2	per gallon.
Coffee,	1	0	0	per centner.
Tea,	1	13	0	do.
Tobacco, leaf,	0	16	6	do.
" manufactured,	1	13	0	do.

British Tariff.

	£	s.	d.	
Sugar, raw,	3	3	0	per cwt.
" refined,	8	8	0	do.
Sprits, distilled,	1	2	6	per gallon.
Coffee,	3	14	8	per cwt.
Tea,	11	13	4	do.
Tobacco, unmanufactured,	16	16	0	do.
" manufactured,	52	18	0	do.

It is right, before concluding, to distinguish the tariff of the *Zollverein* from that of those northern states which have kept aloof from it; especially as their import duties are very much lower than those of the *Zollverein*. The Hanoverian tariff is lower, generally by one half, in some cases by more than two-thirds. For example, the Hanoverian duties are, upon—

	£	s.	d.	
Cotton yarn, unbleached,	0	3	1	per centner.
Cotton manufactures,	1	17	6	do.
Woollen manufactures, from	1	5	1	do.
to	1	17	6	

exclusive, however, of the Stade duties, which Hanover continues to levy by the mere sufference of Great Britain and other powers. The import duties of Mecklenburg are very low, being less than two per cent. on foreign manufactures. Hamburg levies only one-half per cent. *ad valorem* on imports, and one-eighth per cent. on exports, and allows goods in transit to pass duty free under certain regulations. The accession of these northern states to their body is anxiously desired by the *Zollverein* communities; it is a favourite object not only of the *Zollvereinsblatt*, but of many reflecting persons of more moderate views. The present state of opinion in these northern states, including the Hanseatic towns, seems to be tending towards their accession at no very distant period. We are fully sensible of the advantages arising from the moderate tariffs of these detached states; and wish there was any prospect of their example influencing the rest of Germany. But we have no faith in the possibility of their being able long to resist that strong current of feeling and opinion which is nationalizing Germany, and which must force them, whether for good or evil, into that union which we have described as the real Germanic confederation. It would, therefore, be but a small and short-sighted policy on the part of Great Britain, if she were to busy herself in trying to counteract a general union of the states of Germany. The mere market of the detached states is not worth consideration, in comparison with the main point of improving our commercial relations with Germany at large; and the inclusion of all these northern states within the *Zollverein*, would be more likely, than any thing we know, to liberalize the character of that association. They are chiefly agricultural, and their interest consequently lies rather in the extension of foreign commerce, than in meeting the selfish views of the manufacturers of the south and west. Hamburg must, of course, remain a free port, receiving and transmitting foreign merchandize like other free ports. She might be to the *Zollverein* states, what Trieste is to the Austrian dominions. But these are arrangements with which Britain has no legitimate concern. The true object of British policy is, not to counteract the extension of the *Zollverein* to the rest of Germany, *but to weaken and destroy that mischievous influence which is now by far too* predominant—the influence of monopoly and class interests.

THE INSURRECTION AT MEXICO,

AND STORMING OF THE VICEROY'S PALACE, JANUARY 15, 1624.

It is a singular truth in the history of Mexico, that during the whole period of its subjection to the Spanish race, it can scarcely be called, at any one time, a happy and contented nation. This did not arise so much, as is often supposed, from the passionate nature and irascible temper of the Castilians, but rather from the fact that Mexico was continnally regarded by the parent country as a distant but wealthy *mine*, whence she derived a princely revenue, without taking thought, for an instant, of the intellectual progress and national advancement of the natives. Indeed, the whole policy of Spain was to repress every independent feeling in the colony, and to make it the recipient of her industrial products, whilst it enriched those scores of needy nobles who were sent from home to repair their wasted fortunes. Thus, all emigration to Mexico, among those who give tone to society, looked to their ultimate return from the colony as from a penitential exile. Men were willing, for a while, to forsake the pleasures of the Spanish Court, and to forego the delights of Madrid and Seville; provided, that in the New World, they could find the hoped for El Dorado, whence they should come back to their native land laden with the spoils they had gained by unscrupulous means or oppressive exactions.

A colonial system like this, and selfish enterprises thus promoted, could have no other than an injurious effect on the Mexican masses. The emigrants were ever *strangers* to the natives. There was no blending of blood and feeling. No fixed location created the idea of "home" and begot patriotism. And, thus, all Mexico was converted into a vast hotel, where the guests tarried for a season, with as little interest in its fate, as travellers feel for the fortunes of their hosts of a single night.

As an illustration of the mode in which Mexico was peculated upon, it is related, that the favorite system of taxing the people for the advantage of her Viceroys, was by creating monopolies of certain necessaries of life, and thus controlling the markets of the colony.

In the beginning of the seventeenth century, the Marques de Serralvo derived an immense revenue from a monopoly of salt; and, though for ten years his annual returns had amounted to at least a million, he was not contented with the result, but sent gifts, worth double his income, to the King and Count Olivares to obtain a continuance of his Viceroyalty for ten years more.

But these oppressions of the supreme authority did not always pass without the rebuke of the people. In 1624, when Carillo de Mendoza y Pimentel, Marques de Gelves, was Viceroy, Mexico was for a time in a state of great distraction, and well nigh revolted from the Spanish throne.

Gelves, it seems, though an excellent ruler, so far as the police of the colony was concerned, was still a most selfish and avaricious person. In

1623, he resolved to monopolize the staff of life among the Indians and lower classes, and despatched one of the wealthiest Mexicans, Don Pedro de Mexia, to buy up the corn throughout the province. This he accomplished successfully, at the price of fourteen rials, the sum fixed by law, at which corn must be sold in times of "famine." The farmers, who, of course, knew nothing of Mexia's plan, and were satisfied that the year would be one of plenty, readily sold their corn, with which the artful purveyor filled his barns and storehouses all over the country.

When the remaining stock that had not been purchased was brought to market and sold, it was suddenly discovered that corn was no where to be bought, save from the granaries of Mexia. "The poor began to complain; the rich to murmur; and *the legal tariff* was demanded from the Viceroy. But he, the secret accomplice of Mexia, at once decided that as the crops had been plentiful this was no year of scarcity, according to the provisions of the law, and that, consequently, the price could by no means be reduced to the standard of "*famine.*" And so, the people, baulked, and suffering, paid the enormous extortions of the Viceroy's agent, resolved to bear the oppression rather than resort to violence for redress.

But, after a while, the intimacy between Gelves and Mexia became more apparent as the confederates imagined they had less cause for concealment; and the poor, again, besought the Viceroy for justice. It was again denied them; and then, as a last hope, they resorted to a higher power, which, in such conflicts with their rulers, had usually been successful.

In those days, Don Alonzo de la Zerna, a man of lofty character and intrepid spirit, was Archbishop in Mexico, and to him the people appealed by deputation and petitions. De la Zerna did not hesitate to throw himself, at once, on the popular side, and promptly *excommunicated* Mexia. But the sturdy and avaricious merchant, protected by the royal authority, was not to be conquered by so immaterial a thing as a prelate's curse placarded on the door of a cathedral. He remained quietly in his house—despatched orders to his several agents, and even *raised* the price of his extravagant breadstuffs.

For a moment, perhaps, de la Zerna was confounded by his daring; yet the act convinced him that Mexia was backed by the Viceroy, and consequently, that any future steps would bring him in direct conflict with the Government. But the time for retreat had gone by on his part. The church, with its supreme power, could never yield, especially in a matter of such popular and just concern; and the Archbishop determined, therefore, to adopt, at once his severest remedy, and by an order of *cessatio divinis*, to stop immediately all religious worship throughout the colony.

This was, of course, a dreadful interdict—the potency of which can only be estimated by those who have dwelt for a season in Catholic countries, where piety is not periodically regulated upon the principle of a seven-day clock; but where worship is openly celebrated, from hour to hour, in the churches. The doors of chapels and cathedrals were firmly closed. A dead silence prevailed over the land. No familiar bells sounded for matins or vespers. The priests and friars went from house to house bewailing the grievous affliction with which they were visited. And the church mourned the sufferings that her rebellious son had brought upon her children. ***But, still, the contumacious Mexia sold his corn.***

At length, however, popular discontent became so clamorous, that even among this patient and suffering people, the life of the Viceroy's agent was no longer safe. He retreated, therefore, to the palace, which was strongly guarded, and demanded protection of Gelves. The Viceroy, at once, admitted him, and took issue with the Archbishop. He immediately sent orders to the priests and curates to cause the bulls and excommunication to be torn from the chapel walls, and all the churches to be opened for religious service. But the resolute clergy would receive no command from the Viceroy, and adhered to their prelate. Finding the churches still closed, and the people still more and more exasperated, Gelves commanded De la Zerna to revoke his censures; but the Archbishop answered that "what he had done was but an act of divine justice against a cruel oppressor of the poor, whose cries had moved him to commiseration, and that the offender's contempt for his excommunication had deserved the rigour of both his censures, neither of which he would revoke until Don Pedro de Mexia submitted himself to the church, received public absolution, and threw up the unconscionable monopoly wherewith he had wronged the commonwealth and distressed the poor."

"But," says a chronicle of the day, "the Viceroy, not brooking the saucy answer of a churchman, nor permitting him to imitate the spirit of holy Ambrose against the Emperor Theodosius," forthwith sent orders to arrest De la Zerna, and convey him to Vera Cruz, where he was to be confined in the Castle of St. Juan de Ulloa, until he could be despatched to Spain. The Archbishop, however, attended by a long array of his prebends, priests, and curates, immediately retreated from the capital to the neighbouring village of Guadalupe, ***but left a sentence of excommunication on the doors against the Viceroy himself!***

This was too much for the representative of the Spanish King to bear in silence, and, of course, left open no means for conciliation between church and state. Gelves could as little yield *now*, as De la Zerna had done before, and nothing remained for him but to lay violent hands on the prelate, wheresoever he might be found. His well paid soldiers were faithfully devoted to him, and he, forthwith, committed the Archbishop's arrest to a bold and unscrupulous officer named Tirol.

As soon as he had selected a band of armed men upon whose implicit obedience he could rely, Tirol left the capital and proceeded to Guadalupe. In the meanwhile, the Archbishop was apprised of his coming, and had prepared to meet him. He summoned his faithful clergy to attend in the sanctuary and put on their vestments. For the first time, after many a long and weary day, the ears of the people were saluted by the sound of bells calling them to the house of God. Abandoning their business in a minute, they thronged the square and eagerly demanded by what sudden interposition of mercy they had been relieved of the fearful interdict; whilst others, more fortunate, perhaps, thronged the doors and crowded the long deserted chapel. The candles on the altar were lighted; the choir began a solemn hymn for the church; and then, advancing along the aisle in gorgeous procession, De la Zerna and his train took up their position in front of the tabernacle, where, with his mitre on his head, his crozier in one hand, and the sacrament in the other, he awaited the arrival of the force that had been sent to take him. It is difficult to say whether this worthy priest designed, by so imposing a spectacle, to strike awe into the mind of a sacriligious soldier, or, whether he felt it to be his duty as a christian prelate to be seized, if seized he must be, at the very altar he had sworn to serve. It is probable, however, from his character, that the latter was the true reason for his act, and, if so, he met his foes and his fate nobly in the cause of justice and religion.

Tirol was not long in traversing the short *league* between Mexico and Guadalupe. As soon as he arrived, accompanied by his officers, he entered the church, and seemed appalled by the gorgeous and dramatic display around the shrine. Not a whisper was heard in the edifice, as the crowd slowly parted to make way for the soldiery, who advanced along the aisle, and humbly knelt for a moment in prayer. This done, Tirol approached De la Zerna, and, with "courteous and fair words," required him to lay down the sacrament, to quit the sanctuary, and to listen to the orders he had received in the royal name. But the Archbishop abruptly refused to comply, and answered, "that, as the Viceroy was *excommunicated*, he regarded him beyond the pale of the church, and as one in nowise empowered to command; he, therefore, required the soldiers, as they valued the peace of their souls, to desist from infringing the privileges of the church, by the exercise of secular power within its holy limits; and he finally declared, "that he would, on no account, depart from the altar, unless he was torn from it with the sacrament."

Upon this, Tirol rose and read the order for his arrest, describing him as a "traitor to his King, a disturber of the peace, and the author and mover of sedition to the Commonwealth."

De la Zerna smiled contemptuously at the officer, as he finished, and taunted him with the Viceroy's miserable attempt to cast upon the church the odium of sedition and popular discontent, when his creature, Mexia, was, in fact, the shameless offender. He conjured Tirol not to violate the sanctuary to which he had retreated, lest his hand might be withered, like that of Jeroboam who had stretched forth an arm against the prophet of the Lord, at the altar.

Tirol, however, seems to have been a man upon whose nerves such appeals had but little effect. He was a blunt soldier, who received the orders of his superiors and performed them *to the letter*. He had been directed to arrest the Archbishop, wherever he found him, and he left the ecclesiastical scandal to be settled by those who sent him. Beckoning, therefore, to a recreant priest, who had been tampered with, and brought along for the purpose, he commanded him, in the King's name, to wrest the sacrament from the prelate's hands. The clergyman, immediately mounting the steps of the altar, obeyed the order, and the desecrated Bishop threw off his pontifical robes, and yielded at once to the civil power. For a moment, he stretched forward his arms in benediction over the people; and then, bidding an affectionate farewell to his flock and clergy, whom he called to witness how earnestly he had striven to preserve the outraged sanctuary, as well as the rights of the poor, he departed, as a prisoner, for Vera Cruz, whence he was despatched to Spain, in a ship expressly for his conveyance.

II.

For a while the people were panic-struck by this high-handed movement against their protector; but, when the momentary effect passed off, and they reflected on the disgrace of the church, as well as the loss of their Archbishop, they began to vent their displeasure against both Mexia and the Viceroy.

This temper of the people was at once observed by the priests and prebends, who still continued faithful to their persecuted Bishop; nor did they hesitate to fan the discontent amongst the suffering Indians, Meztizoes, and Creoles, who omitted no suitable occasion to express their hatred of the Spaniards, and especially of Tirol, who had been the Viceroy's tool in the infamous arrest of De la Zerna.

A fortnight elapsed, and that daring officer had already delivered his captive at Vera Cruz, and returned to Mexico. Popular clamour became at once loud against him. Whenever he appeared in public, he was assailed with stones and curses; until, at length, an exasperated mob attacked him in his coach, with such violence, that it was alone by the speed of his mules, lashed by the affrighted postillon, that he escaped into the Viceroy's palace, whose gates were immediately barred against the pursuers.

Meantime the news spread throughout the town that this "Judas"—this "excommunicated dog"—had taken refuge with Gelves; and the neighbouring market-place became suddenly filled with an infuriated crowd, numbering between six and seven thousand Indians, negroes, and mulattoes, who rushed towards the Palace with the evident intention of attacking that stronghold.

Seeing this outbreak from a window of his residence, the Viceroy sent a message to the assailants, desiring them to retire, and declaring that Tirol had escaped by a postern. But the spirit of the people was up, and not to be pacified by such an excuse. At this juncture several priests joined the crowd, and a certain Salazar was especially zealous in exciting the multitude to summary redress. The pangs of hunger were for a while forgotten in the more bitter excitement of religious outrage.

By this time the mob had obtained whatever arms were nearest at hand. Poles, pikes, pistols, guns, and halberts, were brought to the ground, and fierce attacks were made on every accessible point of the royal dwelling. Neither the judges nor the police come forward to aid in suppressing the riot and protecting Gelves; but, it is related, that they sat quietly at home, saying: "Let the youngsters alone, they will soon find out both Mexia and Tirol, as well as their protector, and the peoples' wrongs will be at length redressed!" A portion of the mob drew off from the palace to assail the adjacent prison, whose doors they soon forced and released the convicts.

Things became alarming to the authorities besieged in the palace, for they were entirely deserted by the citizens and the police. Whereupon the Viceroy ascended to the Azotea* with his guard and retainers, and displaying the royal standard from the staff, caused a trumpet to be sounded, calling the city to uphold the King's authority.

But the reply to this summons was still in an unrelenting tone —"Viva el Roy! Muerea el mal gobierno; muerea los dos comulgados!"—"Long live the sovereign! but down with his wicked government, and death to the excommunicated wretches." These shouts, yelled forth by the dense and surging mob, were followed by vollies discharged at the persons on the *Azotea*, who, for three hours, returned the shots and skirmished with the insurgents. Stones, also, were hurled from the parapet upon the crowd; but, it is related in the chronicles of the times, that not a single piece of ordnance was discharged upon the people, "for the Viceroy had none for the defence of his palace or person, neither had that great city any for its strength and security."

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* The flat roof of the Palace.

So passed the noon and evening of that disastrous day; but, at night-fall, the baffled mob, who had been unable to make any impression upon the massive defences of the palace, brought pitch and inflammable materials, with which they fired the gates of the prison and of the royal residence. The bright flames of these combustibles sent up their light in the still evening air, and, far and wide, over the town spread the alarm that the beautiful city of Mexico was about to fall a prey to the devouring element. Frightened from their retreats, the judges and chief citizens who had influence with the people, rushed to the *plaza*, and, by their entreaties, efforts were made to extinguish the fire. But the palace-gates had fallen; and over their smouldering ruins the infuriate assailants rushed into the edifice to commence the work of destruction. The magistrates, however, who had taken no part against the people, soon appeared upon the field, and stopped the *saqueo*. But Mexia and Tirol both escaped, whilst the conquered Viceroy, disguised as a friar, stole through the crowd to the cloister of the Franciscans, where, for many a weary month, he lay safely hidden in the sanctuary his rapacity had denied to the venerable De la Zerna.

So ended this base attempt of a Spanish nobleman to enrich himself by the plunder of the Mexicans. The fate of Mexia and of Tirol is unknown. Gelves was recalled to Spain, and, after being *well received* at court, was made master of the royal horse; whilst the noble-hearted Perez de la Zerna was degraded from his Mexican Arch-prelacy, and appointed to the petty bishoprick of Zamora, in Castile.

Such was the *justice* of Spanish Kings and Viceroys to the peculators and protectors of the Mexican people.

THE VILLAGE OF SOMERVILLE, NEW JERSEY,

AND ITS WATER POWER.

In looking at the various improvements in this vicinity to develope the resources of the country, our attention is arrested by this water power. It is comparatively new; its advantages are, therefore, not generally known. Its proximity to this city, the facilities for transportation of passengers and freight to and from it; its admirable location for manufacturing purposes, and value to its owners, all entitle it to our favourable notice.

This power is situated at Somerville, in New Jersey, on the Raritan river. The village is one of the most flourishing in the state, and is the centre and seat of justice of a fertile county, whose annual agricultural productions are equal to any in the state. The village contains a population of about two thousand, whose morality and industry are sure pledges of a continued prosperity. The salubrity of the climate and the beauty of the scenery are the admiration of all who visit this beautiful spot. It is the termination of the rail road leading from this city to Somerville, and is near the Delaware and Raritan Canal, which renders the market at Philadelphia and New York, equally accessible.

The distance to the steamboats at New Brunswick is but about ten miles, and by rail road, it is but twenty-two miles from the power to the ferry boats, which ply between this city and Elizabethtown. The great thoroughfares from other productive counties to New Brunswick, heretofore the great grain market, pass through this village. These facilities for transportation, although already very great, are rapidly increasing, and the rail road from Somerville to Easton, in Pennsylvania, will soon be completed, leading to regions of vast quantities of coal and iron ore.

Perhaps, after all that can be said in its favour, and there are few of our neighbouring villages of which more can be said, the chief excellence of the place is the charm of the residence for persons engaged in manufactures. The economy of living, the abundance of provisions, and the mildness of the climate, are advantages which it possesses in an eminent degree.

The Raritan river, upon which this power is formed, rises in the upper part of Sussex county, New Jersey, and, as is well known, empties itself into this harbour. It is supplied with a great number of tributary streams, so that in the dryest seasons there is always a large supply of water. The power has been obtained by the construction of a dam below the confluence of the north and south branches, which, when necessary, will divert the whole of the water from the main channel. A canal has been constructed to conduct the water to a point within about a half a mile of the village, where is found a convenient place for the erection of mills and manufacturing establishments. Its whole length is three miles, its width is forty-seven feet, and its depth is four feet six inches at the upper end, and five feet nine inches at the termination, where a fall of sixteen feet six inches is obtained.

About two miles below the dam there is a natural reservoir of half a mile in length, varying in width from one hundred to two hundred and fifty feet, and near the termination of the canal there is another reservior, covering about five acres, and the canal is so supplied with guard gates that the water in the canal and reservoirs may be kept at a uniform heighth, regardless of floods or drought. Below this the water is again restored to the main channel of the river. We learn from the report to which we are indebted for some of these facts, that the whole area of the surface of the water in the canal and reservoirs is between twenty-seven and twenty-eight acres, without including the pond about the dam, which is upwards of twelve acres. The water will flow in this canal at the rate of two feet per second, and will discharge 20,000 cubic feet per minute.

The chief engineer of the Delaware and Raritan Canal Company, who has for a series of years been conversant with this river, and guaged it at all seasons for several successive years, and at its lowest stages in the very dryest seasons, reports the following estimate of the quantity of water supplied, viz:

150 cu. ft. per sec.—	9000	cu. ft.	per min.—	1968-59	under	30 in. head—	13⅔	59 ft.	1 year.
200 " "	12000	"	"	2628	"	"	18¼	"	10½ mos.
300 " "	18000	"	"	3936	"	"	27⅓	"	8 mos.
400 " "	24000	"	"	5256	"	"	36½	"	4 mos.

Each of the above numbers, including all the preceding. In making the above estimate, the engineer remarks: "I intend the foregoing, as an estimate of the quantity of water in dry seasons, and the lowest quantity supplied in very dry weather of such seasons."

In addition to the above, the extra quantity of water gained by filling the canal and reservoir during the night, will supply an orifice of three square feet under the same head, for the space of fourteen hours each day, allowing an interval of one hour at noon for filling up the canal, which, added to the above, will give

16⅔	square	feet	for	one year.	
21¼	"	"	"	10½	months.
30⅓	"	"	"	8	"
39½	"	"	"	4	"

These estimates have been made with the utmost caution, and with a view of reducing them to absolute certainty, while from careful observation, it has been satisfactorily ascertained, that at no time within the last three years has the natural flow of the river been reduced to 13 2-3 square feet. And it is confidently believed, that it will require extraordinary drought to diminish it to that quantity.

The sites for manufacturing establishments are handsomely and conveniently located around the reservoir, of from fifty to one hundred feet in front, and varying in depth from one hundred to two hundred feet.

Waste weir and water gates are constructed within a short distance of the termination of the main raceway, sufficient to discharge all surplus water. The whole work is constructed in the most permanent and durable manner; the principal outlines having been suggested, and the whole plan and execution having been approved, by the engineer and superintendant of the Delaware and Raritan Canal.

The proprietors of this work were incorporated by an act of the Legislature of New Jersey, passed the 28th of February, 1840, by the name of "The Somerville Water Power Company," with a capital stock of $200,000, with a right to increase the same $300,000. Under their charter, full power has been conferred upon them to purchase and hold lands, mills, manufactories, and water rights, within the limits, now occupied by them for the purposes of their incorporation.

Under this act of incorporation the company have been organized with a capital stock of $200,000, which has been vested in the lands purchased by the company for the erection of their dam and raceways, and sites for manufacturing establishments, a particular description of which is contained in a map filed in the office of the Secretary of the State of New Jersey, and also the privileges and immunities appertaining to the same, and guaranteed by the charter.

The work is now completed, and several mills and manufacturing establishments have already been located there, and are in successful operation. The company is now leasing its water in such quantities as may be needed, and upon terms as favourable as can be found elsewhere, and are selling and leasing pleasant sites for dwellings and warehouses.

The Legislature have recently incorporated "The Somerville Woollen Company," with a capital of $100,000; "The New Jersey Cotton Mill Company," with a capital of $100,000; "The Rope, Bagging, and Duck Company," with a capital of $200,000; and "Wood's Shingle Machine Company," with a capital of $50,000—all to be located at this water power.

The solid advantages of location, country, population, extent, uniformity of power, cheapness of transportation to and from market, and cheapness of living in the aggregate, which are there combined, have inspired the proprietors with the belief that they will be rewarded for their large outlay; consequently they have spared no pains to make an improvement valuable to the country and highly creditable to their enterprize. They have done for the citizens of New York, what the proprietors of the water power at Lowell did for the citizens of Boston, although not on so large a scale; they have formed a power and furnished a site for the profitable employment of their capital, and it seems to us to hold out strong inducements to enterprising men who are disposed to embark their capital in manufactures.

The period has, in fact, arrived, when a large portion of the capital heretofore employed in commerce can be, and we think will be, profitably withdrawn, and more safely employed in rendering our country independent of foreign labour—and this water power at Somerville offers, in our opinion, every advantage for such an investment.

BIOGRAPHICAL SKETCH OF
CHANCELLOR LIVINGSTON.

Among the former distinguished citizens of the State of New York, there is not one whose memory is entitled to higher consideration than is that of Robert R. Livingston, its former Chancellor—whether wec onsider the benefits received from his exalted character and high attainments as a statesman, a diplomatist, or in what is sometimes of more value, as a citizen of enlarged views, munificent liberality, and of great public spirit.

Born, November 27th, 1746, of a distinguished family, he entered early into public life. Having graduated at Kings, now Columbia College, New York, in 1765, he was in 1775 elected a member of the Legislature of the State for Dutchess county, where he so far distinguished himself, that in the following year, he became a member of the first Congress in 1776, and was placed on the same committee with Jefferson, Adams, Franklin, and Sherman, to draft the celebrated Declaration of American Independence.

His great attainments did not leave him long in the capacity of a member on the floor of Congress, for in October, 1781, he was chosen the first Secretary of State for Foreign Affairs, the duties appertaining to that office having been previously performed by a committee. Such were his habits of business, and so wholly did he devote himself to the arduous affairs of the Government, that the domestic concerns of the country were partially intrusted to him. In 1783, he resigned his office, and received a vote of thanks from Congress for the able manner in which he had conducted its then complicated and arduous duties. In the diplomatic correspondence, edited by Jared Sparks, his valuable and masterly public writings will be found.

In 1788, he was appointed a delegate to the State Convention of New York, which adopted the Federal Constitution, of which his eminent fellow-citizens, Hamilton and Jay, were members.

In 1794, Washington, who was remarkable for his almost intuitive knowledge of character, offered to Mr. Livingston the Mission to France, which he declined, and it was afterwards conferred upon Mr. Monroe. Under the new Constitution of this State he was appointed Chancellor, which office he filled with great ability, and continued in it until 1801. In that year he was induced, by Mr. Jefferson, to accept the office which he had previously declined, and was sent as minister plenipotentiary to the Court of Versailles. Bonaparte, then First Consul, received him with every mark of respect, and his services in the delicate matters entrusted to his charge were of the highest order, commanding the universal approbation of his countrymen.

Possessing a large fortune, and alive to the importance of sustaining the reputation of his country, he was very liberal in his expenditure, and extended to his countrymen, who visited Paris, the most unbounded hospitality. Among the duties which devolved upon him, in his official capacity, was that of the purchase of Louisiana, which, with the assistance of Mr. Monroe, he accomplished upon an agreement to pay the sum of 15,000,000 of dollars. Notwithstanding the opposition which that measure occasioned at the time, its wisdom and foresight have long since been acknowledged by all parties, in the immense advantages resulting from a free access to the ocean, for the products of the great valley of the Mississippi. We can now, at this distance of time, when all the political feeling of the period has passed away, place a just estimate upon this measure; which has proved a source of such unbounded prosperity to the great western regions of the United States. Figures, with all their acknowledged power, would fail to enumerate its immense advantages.

But what is most remarkable is, that Chancellor Livingston should have made in Paris, at this period, the acquaintance of Fulton—should have formed an intimate and lasting friendship with him—should have foreseen his rising genius—and that the friendship thus formed should have enabled Fulton to carry out his plans of steam navigation. Thus, by this coincidence of circumstances, did the Chancellor not only secure the great *debouche* of the Mississippi to us, but prove the means of enabling Fulton to achieve the incalculable advantages of rapidly ascending and descending this American Nile by a medium then first projected.

Who can reflect upon this coincidence without almost a belief that there was something more in it than mere accident, or what is commonly called chance. Fulton was at that time struggling under the disadvantages of want of means to give effect to the mighty projects which his genius had conceived, with little prospect of overcoming this radical difficulty, when meeting with his illustrious countryman, of abundant fortune and unbounded liberality, he formed an intimacy which led to the accomplishment of one of the most important results in the affairs of commerce that the world has ever known.

Surely we owe a debt of gratitude, which it is difficult to repay, to the memory of the man who was willing to embark large sums of money in an untried experiment, of doubtful success; and deeply as we should feel the obligations we are under to Fulton, as one of the greatest benefactors of the age, we should never forget the similar obligation to his high-minded and liberal patron.

The exalted office of Minister to the splendid Court of St. Cloud, Chancellor Livingston resigned, as he had done the other dignified places to which he had been called by the approving voice of his country; and having delivered up the station to his successor, General Armstrong, he travelled into Italy, Switzerland, and Germany, making profound observations on the political, social, and agricultural situation of each; some of which were destined to be of great value on his return to his native land.

He reached his seat called Clermont, on the Hudson, in June, 1805. But it was not for such a mind as Chancellor Livingston possessed, to remain insensible to the advantages which might result to his country from a close observation of European knowledge, even while charged with the weighty affairs of her diplomatic relations. Accordingly, we find him in active correspondence from Paris with the late Benjamin De Witt, Esq., of Albany. It appears that a society had been incorporated there, under the title of the Society for the Promotion of the Useful Arts, the chief aim of which was the advancement of agriculture. Of this society, Chancellor Livingston was President, and B. De Witt, Esq., one of the Secretaries. As early as November, 1802, we find in the proceedings of this society an interesting letter, dated from Paris in that year, from the President to its Secretary.

In this letter he gives the following unostentatious account of his arrival in France:

"I landed at L'Orient the 16th of November. This season of the year is extremely unpleasant, and more particularly on the eastern sea coasts, where it rains considerably; while in the interior, though they have less rain, they are subject to thick and heavy fogs, during which, as far as I may judge from the autumns I have seen, weeks pass away without a clear view of the sun.

"The extreme bad weather we had upon our voyage, and the necessity of having our baggage unpacked, washed, and dried, our trunks having been several times floated in the cabin, compelled us to remain eight days at L'Orient. We did not reach Paris till the 3rd of December. I mention this to show how unfavourable the season was for the acquisition of agricultural knowledge on the journey.

"L'Orient was formerly the emporium of the East India trade, by favour of which it flourished. The magazines of the Company were spacious, elegant, and well arranged; but at present they are only melancholy monuments of their former splendour, and contain nothing but a few cargoes of American tobacco. I could not find that there was any manufacture introduced there to supply the vacuum made by the diminution of its commerce, except a small fabric of China, which I visited. It is made with the same materials used here (in Paris) for making the Seves. These are taken from Paris, ready mixed for the manufacturer, and, as far as I can judge, neither the forms nor the quality were inferior to those of the Seves, except that, having no sale for them, they do not employ themselves in those expensive ornaments which occupy the artists of Paris; to give you some idea of which, I will just mention a set of China now here, and made for Lord Oxford, each plate of which cost seventeen guineas the first hand. This fabrick of L'Orient is worthy of mention, because, as we indulge ourselves in the luxury of French China on account of the beauty of its forms, we may obtain the sort we use from thence cheaper, and at much less risk of breakage, and not inferior in quality, to that exported from hence. I have sent to Dr. Mitchell samples of the earth made use of in this manufacture. Could it be found in our State, it would be very easy to send you artists, who would gladly go over to work it."

It would exceed the limits we have prescribed to ourselves in this brief notice of our eminent fellow-citizen, to insert the whole of this letter, although it gives an interesting account of the country through which he travelled. We must, therefore, content ourselves with what he says, in concluding it, upon the subject of French sheep:

"The common sheep of France, I think, very much resemble the sheep of New England; the best are rather inferior to the best in New York; but more so in their wool, than in their carcasses, which are as large, if not larger than ours; but the flesh of these is much less esteemed than that of the small breed of Brittany, which is extremely delicate and high flavoured. All the sheep of this country are housed at night, and attended by a shepherd in the day, who leads them over the commons and stubble grounds; and though there are no enclosures, or anything to separate them from gardens and sown fields, yet so vigilant are the shepherd's dogs, that the sheep never trespass, but satisfy themselves on the coarsest food while dainties are in their view.

"I should except from these observations the race of the Merinos, or Spanish sheep, which have been lately introduced, as they well deserve a very particular notice, and the rather, as I have now some in our own State, and I am told a number have been imported by Col. Humphreys; so that, with a little attention, we may be amply stocked with the only species which yields wool of sufficient fineness to produce broad cloths, and which on many other accounts should claim particular attention. But as the vessel to take this letter is on the point of sailing, I must defer this and a variety of other matters to the next conveyance."

On the subject of the Merinos imported by him he says: "In the year 1802, I purchased from the national stock, at the veterinary school at Chalons, two young rams and two ewes. They cost me, delivered at Paris, five miles distant, 1,200 francs. Charges in getting them to a sea port, maintenance till the ship was ready, and on board, though the patriotism of the captain would not permit him to take any freight, brought them to almost double that price by the time they arrived at my farm. One of the rams I spared to my brother; the other, with two ewes, were treated exactly as my other sheep. They were fed on hay, and had no shelter. They brought me two lambs, and sheared 3 3-4 lbs. each of washed wool.

"The two bred at Clermont are, in every respect, as fine sheep as the imported rams, without the smallest difference between the wool of one or the other."

The Chancellor, as we have noticed in our Historical Sketch of the Woollen Manufacture, subsequently imported into this country more Merino sheep, and thus, in conjunction with Col. Humphreys, laid the foundation for an improvement in American wool, which will be duly appreciated when it is known, that notwithstanding we now manufacture fine cloths upon a large scale, we imported in 1844, but 199,763 lbs. of wool over 7 cents per lb., while we imported 13,808,645 lbs., at and under that price.

We make another extract from one of the Chancellor's letters to the Society at a subsequent period, in which he says:

"In an excursion I lately made into Flanders, I observed at some distance from the road, several large beds of earth, that appeared to me to emit smoke and flame, which two men were tending. I stopped the postchaise, and went to examine it. I found it was *pyrites*, sufficiently impregnated with sulphur to burn when dry. This was laid into beds and ignited. They endeavoured to extinguish the fire when the ashes were red; if it burnt longer, they became black, and their quality was not so good. This earth, so burnt, was easily reduced to powder by a wooden mallet, and in this state was carried on the backs of asses forty and fifty miles, as a manure, and was used particularly for grass, at the rate of about six bushels the acre. The seed grain was also covered with it, as it is with gypsum in our country. * * * * *

"From the place where they were burning the earth, I went to the ore bed, which I examined, and found the earth very similar to what I have seen on my own estate at Clermont, and which may indeed be found in many of our black meadows. I send you a sample of the earth, that you may search for it at home, and would recommend to the Society to have some experiments made on this interesting subject." * *

How truly noble was it in this distinguished man to have these simple, but important, views constantly before him. On the subject of wool he was truly prophetic; for in a subsequent letter he says, speaking of the introduction of the Merino sheep into America: "I confess that, since the introduction of Spanish sheep, I have become so sanguine as to look forward to a period, and that too at no great distance, when this and the Eastern States will not only manufacture cloths for their own consumption, but for that of their neighbours. It is certain that no country in Europe is better calculated for fine woolled sheep than this and the neighboring States." This last-mentioned letter was written after his return to Clermont, where, as before stated, he arrived in 1805, rebuilt a venerable mansion on his ample paternal estate, where he passed the remainder of his useful life, devoting it to the promotion of improvements in agriculture and the arts, until the year 1813, when he was suddenly removed "to another and a better world," beloved and regretted by a grateful country. We have been induced to give this slight biographical notice of this distinguished man and estimable citizen in accordance with our intention, expressed in our prospectus, to contribute as much as our limited space will permit, to keep alive a generous recollection of the political services and civic virtues of those whose lives have shed a lustre upon the annals of our country—regretting only that we have it not in our power, in a work such as this, to do more ample justice to merit such as belonged, in an enlarged degree, to the great and good man of whose useful life we have made this brief record.

APPROACHING

FAIR OF THE AMERICAN INSTITUTE.

In calling the attention of our Patrons to the following Circular of the American Institute, announcing its *eighteenth* annual fair, we are well assured they will feel, as we do ourselves, the highest gratification in witnessing the patriotic zeal with which the members of this noble institution continue their meritorious exertions for the promotion of domestic industry—the real wealth of a nation.

In no possible way, can the useful and ornamental arts, be so substantially promoted, as by exhibitions of their splendid results, in the manner, for so many years past, practised by the American Institute; nor can there be any doubt of the great use, and beneficial results of the shows of cattle, horses, and other live stock, and the ploughing and spading matches.

Those who can remember some of the first efforts, and can thus make the comparison of what these splendid fairs now are, with what they were at the commencement, can bear testimony to the mighty advances which have been made in American skill and ingenuity. *We*, are among this number, and feel a just pride in certifying to the valuable services rendered to the artisan and to the country, by these exhibitions to the admiring gaze of the public, of every article to minister to domestic comfort, and gratify a taste for the useful and the ornamental.

Justly popular as the American Institute has always been, we have ever felt that its immense advantages have been more than commensurate; nor have the disinterested exertions of its worthy President and Managers been less entitled to the highest consideration of the American people, for its benefits have been truly national. In our view, too much praise cannot be awarded to the disinterested and voluntary contributions of time, money, and talent, which have brought to the perfection these annual fairs have now reached, such a school for the advancement of American skill and genius. To say nothing of the stimulus of the annual premiums that are awarded, the competition for the attainment of superiority in every mechanical pursuit, has produced the most marked and salutary effects upon those through whose exertions the comforts of society are so greatly promoted.

We hope, therefore, this circular will claim the best attention of the public—and sure we are, that those who are sustaining the truest interests of the country while preparing such a delightful spectacle, cannot fail to experience the highest possible reward, in the consciousness of having faithfully discharged a duty at once so gratifying to our citizens, so creditable to their exhibitors, and so honorable to themselves.

[CIRCULAR.]

EIGHTEENTH ANNUAL FAIR OF THE AMERICAN INSTITUTE.

The conducting of this anniversary celebration of the progress of a great nation in industry and the arts, has been confided by the Institute to the undersigned managers.

The exhibition will be opened to the public on Monday, the 6th day of October, 1845, at 12 o'clock, M., at Niblo's Garden, Broadway, in the city of New York.

Contributions from exhibitors will be received on Thursday, Friday, and Saturday of the previous week. To insure the most favourable locations, and the advantages of competition, the products of the manufacturer, mechanic, and artisan, must be delivered and entered on the books of the Fair, on one of those days. The chance of a good location will be in favour of those who come the first and second day. Fruits, flowers, &c., form an exception. The proper time for entering them will be specified in the agricultural and horticultural circular, or notices hereafter to be issued.

Arrangements are already made, and in progress, for carrying out the eighteenth celebration, are on a scale more extended and attractive than ever before; and if public favour towards this Institution continues to extend and increase each year as it has during the last seventeen, means will be afforded of enlarging the value of the premiums, and thereby creating a more intense and universal competition. Several opulent and munificent individuals, desirous of making the exhibition worthy of our great emporium, and giving a fresh impulse to improvements in our country, have volunteered donations for the purpose; others have promised not only to contribute, but to use their influence to cause their friends to do the same. After reserving what discretion demands, to cover the annual current expenses of the Institution, every dollar will be expended by the managers to promote improvements in agriculture and the arts. It is the fixed policy of the Institute, to appropriate every dollar for the benefit of that public which has been its generous, unfailing patron.

There will be an opening address, followed by novel and interesting displays of the *Pyrotechnic art.*

On Thursday, the ninth day of October, a national convention of farmers and gardeners, and silk culturists will be held. Circulars, with questions prepared, will be issued. Washington's Home Department of Agriculture, recommended by the Institute, and unanimously approved by a national convention held last year, will again be urged. These precious interests demand extensive concert, unanimity, and profound deliberation; and *the* TIME, during the great Fair—and *the* PLACE, the emporium of the western world, were by the Convention of last year, decidedly resolved to be the best suited to accomplish the objects sought.

For the second week, has been assigned the show of cattle, horses, and other live stock, and the ploughing and spading matches. Fine horses, combining, size, strength, and fleetness, for wagon and carriage—healthy fat cattle and sheep, suitable for market—well trained, well matched, and powerful working cattle, and the best milch cows, will each and all command high premiums. To accommodate those interested in the cattle show, a beautiful plot of ground has been secured between Twenty-third and Twenty-fourth streets, near the intersection of Broadway and the Fifth Avenue, with commodious rooms on the premises for accommodating the committees. The ploughing and spading matches will be held in New York, or its vicinity. For particulars, see agricultural circular.

The anniversary and other addresses will also be delivered in the course of the second week. The horticultural exhibition of vegetables, fruits, flowers, &c, will be in Niblo's long promenade, and superintended by eminent horticulturists. Great varieties of rare seeds have been, the last year, scattered by the Institute over our country, with the express understanding, that a portion of their products be brought to the Fair, to swell the beauties of the display. The great saloon, and the second story of the north wing, will, as usual, be reserved for the fabrics of the factory and workshop; made of cotton, woollen, silk, and all the varieties of metals and other substances, the fruits of that genius and invention, which have commanded the admiration of the world. The first floor of the north wing of the soloon will be animated by moving machinery, propelled by our best model steam engines, to afford visible, practical evidence to all of their merits and value.

The best new and useful inventions will be objects of the highest honours. Also, establishments affording large varieties of specimens of well constrncted agricultural and horticultural machines and implements; but in no case, for want of competition, or other cause, will any article be entitled to premium, if adjudged intrinsically not deserving particular commendation.

This first general appeal is made to our countrymen as a notice for preparation. Others more in detail will follow. Thousands and tens of thousands of ingenious and patriotic friends, we know, stand ready to contribute their utmost efforts to perfect and embellish every art, agreeable and useful to our Republic. Past experience convinces us, that on the coming occasion, American genius and industry, in all their numberless products, will show forth more conspicuously than ever. All classes of this great people are invited to think of our objects, and the effect of the countless specimens of new inventions and old ones improved—of improved fabrics of finer finish and lower prices, by processes unheard of before—all submitted to the examination, scrutiny, reflection, and discussion of hundreds of thousands of inquiring and enterprising freemen, for weeks, at seventeen successive anniversaries. By such means improvements must receive acceleration and the comforts of life for the millions multiplied, improved and brought nearer the reach of all.

The managers will do all that unbought zeal can do, to make this Eighteenth Celebration of American Industry and the Arts worthy of our great city, and honourable to the nation. Our most able and distinguished citizens will be invited to address the visiters on subjects embracing the solid welfare of the whole Union. To sustain our best public institutions, we have a willing population, that possess more original native capabilities for producing great results than has ever before been found on the globe; enjoying full liberty for the exertion of all their powers, both of body and intellect. By the cultivation of only one American staple, Christendom is supplied with a large proportion of her clothing. And our silk culture, if pursued with skill and confidence, may soon afford silk for many more.

The steamboat, which is rapidly conveying knowledge, civilization, and the arts into the remotest western prairies, and the most sterile African deserts, is emphatically a product of American genius and skill.

Let our whole people, with united zeal, energy, and power, uphold and sustain all well devised means for advancing, perfecting, and perpetuating our industry, wealth, liberty, and glory.

ADONIRAM CHANDLER,
EDWD. T. BACKHOUSE,
JOHN CAMPBELL,
JAS. VAN NORDEN,
H. W. CHILDS,
JOSEPH CURTIS,
GEO. ENDICOTT,
WM. HALL,
JOSEPH TORREY,
JAS. R. SMITH,
MARTIN E. THOMPSON,
ISAAC FRYER,
JOHN D. WARD,
EDWARD CLARK,
ROBERT LOVETT,
GURDON J. LEEDS,
A. D. FRYE,
T. B. STILLMAN,
JOSEPH COWDIN,
JAS. J. MAPES,
GEO. F. BARNARD,
C. C. HAVEN,
CHAS. MAPES,
JONATHAN DODGE,
T. W. HARVEY,
T. B. WAKEMAN,
Managers.

Repository of the American Institute,
New York, July 2, 1845.

AMERICAN FACTORIES.

In our last number we quoted somewhat largely from the Rev. Mr. Scoresby; and we hold him in reserve for some future number, not having extracted from his excellent little book, by any means, all we intend giving to our readers. But we have two new witnesses to offer in proof of the justness of Mr. Scoresby's views, and we prefer giving their testimony at this time.

The first, is Mr. Knight, the English editor of a work called "Mind among the Spindles," published in London, and reprinted in Boston, in 1845. In his introduction he thus remarks, and reviews the several articles he publishes, all of which are bona fide the production of the young women of Lowell, who work in the factories, and who edit and write for a monthly periodical published there, called the "Lowell Offering," from many numbers of which Mr. Knight takes his extracts, and makes up his book. But he shall speak for himself.

"The qualities which most struck us in these volumes were chiefly these: *First*—there is an entire absence of all pretension in the writers to be what they are not. They are factory girls. They always call themselves 'girls.' They have no desire to be fine ladies, nor do they call themselves 'ladies,' as the common fashion is of most American females. They have no affectations of gentility; and by a natural consequence they are essentially free from all vulgarity. They describe the scenes amongst which they live, their labours and their pleasure, the little follies of some of their number, the pure tastes and unexpensive enjoyments of others. They feel, and constantly proclaim without any effort, that they think it an honour to labour with their hands. They recognize the real dignity of all useful employments. They know that there is no occupation really unworthy of men or women, but the selfish pursuit of what is called pleasure, without the desire to promote the good of others by physical, intellectual, or moral exertions. *Secondly*—many of these papers clearly show under what influences these young women have been brought up. An earnest feeling of piety pervades their recollections of the past, and their hopes for the future. The thoughts of home, too, lie deep in their hearts. They are constantly describing the secluded farm-house where they were reared, the mother's love, the father's labours. Sometimes a reverse of fortune falling upon a family has dispersed its once happy members. Sometimes we see visions of past household joy through the orphan's tears. Not unfrequently the ardent girl, happy in the confirmed affection of some equal in rank, looks exultingly towards the day when she may carry back from the savings' bank at Lowell, a small dower to furnish out their little farm on the hill side, where the barberries grew, so deliciously red and sour, in her remembrance of childhood. *Thirdly*—there is a genuine patriotism in the tone of many of these productions, which is worthy the descendants of the stern freemen who, in the New England solitudes, looked tearfully back upon their fatherland. The institutions under which these young women live, are different from our own; but there is scarcely a particle of what we have been too apt to call republican arrogance. The War of Independence is spoken of as it ought to be by every American, with feelings of honest exultation. But that higher sentiments than those of military triumph mingle with the memory of that war, and render patriotism something far nobler than mere national pride, may be seen in the little poem which we gladly reprint, 'The Tomb of Washington.' The paper called 'The Lock of Gray Hair,' is marked by an honest nationality, which we would be ashamed not to reverence. *Fourthly*—like all writers of good natural taste, who have not been perverted into mere imitators of other writers, they perceive that there is a great source of interest in describing, simply and correctly, what they have witnessed with their own eyes. Thus, some of the home pictures of these volumes are exceedingly agreeable, presenting to us manners and habits wholly different from our own, and scenes which have all the freshness of truth in their delineations. The old stories, too, which they sometimes tell of past life in America, are equally interesting; and they show us how deeply in all minds is implanted the love of old things, which are tenderly looked back upon, even though they may have been swept away by what is real improvement. *Lastly*—although there are necessarily in these volumes, as in every miscellany, some things which are tedious, and some puerile, mock sentimentalities, and laboured efforts at fine writing, we think it would be difficult upon the whole for a large body of contributors, writing under great indulgence, to produce so much matter with so little bad taste.. Of pedantry there is literally none. The writers are familiar with good models of composition; they know something of ancient and modern history; the literature of England has reached them, and given a character and direction to their thoughts. But there is never any attempt to parade what they know; and we see they have been readers, only as we discover the same thing in the best educated persons; not in a display of their reading, but in a general tone which shows that cultivation has made them wiser and better.

"Such were the opinions we had formed of 'The Lowell Offering,' before we were acquainted with the judgement pronounced upon the same book by a writer whose original and brilliant genius is always under the direction of kindly feelings towards his fellow-creatures, and especially towards the poor and lowly of his human brethren. Mr. Dickens, in his 'American Notes,' thus mentions 'The Lowell Offering,' of which he says, 'I brought away from Lowell four hundred good solid pages, which I have read from beginning to end;'—'Of the merits of 'The Lowell Offering,' as a literary production, I will only observe, putting entirely out of sight the fact of the articles having been written by these girls after the arduous labours of the day, that it will compare advantageously with a great many English annuals. It is pleasant to find that many of its tales are of the mills, and of those who work in them; that they inculcate habits of self-denial and contentment, and teach good doctrines of enlarged benevolence. A strong feeling for the beauties of nature, as displayed in the solitudes the writers have left at home, breathes through its pages like wholesome village air; and though a circulating library is a favourable school for the study of such topics, it has very scant allusion to fine clothes, fine marriages, fine houses, or fine life. Some persons might object to the papers being signed occasionally with rather fine names, but this is an American fashion. One of the provinces of the State Legislature of Massachusetts is to alter ugly names into pretty ones, as the children improve upon the tastes of their parents."

"If the separate articles in 'The Lowell Offering' bear signatures which represent distinct writers, we have, in our selection of thirty-seven articles, given the productions of twenty-nine individual contributors. It is this circumstance which leads us to believe that many of the papers are faithful representations of individual feelings. Tabitha, from whose pen we have given four papers, is a simple, unpretending narrator of old American scenes and customs. Ella, from whom we select three papers, is one of the imaginative spirits who dwell on high thoughts of the past, and reveries of the future—one who has been an earnest thinker as well as a reader. Jemima prettily describes two little home-scenes. Susanna, who to our mind exhibits natural powers and feelings, that by cultivation might enable her to become as interesting an historian of the old times of America in the days before the Revolution, as an Irving or a Cooper, furnishes us with two papers. The rest are Lisettas, and Almiras, and Ethelindas, and Annettes, and Theresas; with others who are contented with simple initials. They have all afforded us much pleasure. We have read what they have written with a deep interest. May the love of letters which they enjoy, and the power of composition which they have attained, shed their charms over their domestic life, when their days of mill service are ended. May their epistles to their friends be as full of truthfulness and good feeling as their contributions to 'The Lowell Offering.' May the success of this, their remarkable attempt at literary composition, not lead them to dream too much of the proud distinctions of authorship—uncertain prizes, won, if won at all, by many a weary struggle and many a bitter disappointment. The efforts which they have made, to acquire the practice of writing, have had their own reward. They have united themselves as familiar friends, with high and gentle minds, who have spoken to them in books with love and encouragement. In dwelling upon the thoughts of others, in fixing their own thoughts upon some definite object, they have lifted themselves up into a higher region than is attained by those, whatever be their rank, whose minds are not filled with images of what is natural and beautiful and true. They have raised themselves out of the sphere of the partial and the temporary, into the broad expanse of the universal and the eternal. During their twelve hours of daily labour, when there were easy but automatic services to perform, waiting upon a machine—with that slight degree of skill which no machine can ever attain—for the repair of the accidents of its unvarying progress, they may, without a neglect of their duty, have been elevating their minds in the scale of being by cheerful lookings-out upon nature, by pleasant recollections of books, by imaginary converse with the just and wise, who have lived before them, by consoling reflections upon the infinite goodness and wisdom which regulates this world, so unintelligible without such a dependence. These habits have given them cheerfulness and freedom amidst their uninterrupted toils. We see no repinings against their twelve hours' labour, for it has had its solace. Even during the low wages of 1842, which they mention with sorrow, but without complaint, the same cultivation goes on; 'The Lowell Offering' is still produced. To us of England these things ought to be encouraging. To the immense body of our factory operatives the example of what the girls of Lowell have done should be especially valuable. It should teach them that their strength, as well as their happiness, lies in the cultivation of their minds. To the employers of operatives, and to all of wealth and influence amongst us, this example ought to manifest that a strict and diligent performance of daily duties, in work prolonged as much as in our own factories, is no impediment to the exercise of those faculties, and the gratification of those tastes, which, whatever the world may have thought, can no longer be held to be limited by station. There is a contest going on amongst us, as it is going on all over the world, between the hard imperious laws, which regulate the production of wealth and the aspirations of benevolence for the increase of human happiness. We do not deplore the contest; for out of it must come a gradual subjection of the iron necessity to the holy influences of love and charity. Such a period cannot, indeed, be rashly anticipated by legislation against principles which are secondary laws of nature; but one thing, nevertheless, is certain—that such an improvement of the operative classes, as all good men—and we sincerely believe amongst them the great body of manufacturing capitalists—ardently pray for, and desire to labour in their several spheres to attain, will be brought about in a parallel progression with the elevation of the operatives themselves in mental cultivation, and consequently in moral excellence. We believe that this great good may be somewhat advanced by a knowledge diffused in every building throughout the land where there is a mule or a loom, of what the factory girls of Lowell have done to exhibit the cheering influences of 'MIND AMONGST THE SPINDLES.'"

The second witness we now bring forward, is the celebrated Miss Harriet Martineau, whose letter to Mr. Knight, the Editor, from whose introduction we have just been quoting, we shall presently give, stopping for a moment only to notice that her testimony is rendered the more important, because she does not confine her remarks to Lowell, but speaks also in the same terms of Waltham; thereby showing that *our* Factory life is an entirely different thing from what the same kind of life is in England. But she too will best speak for herself. Here is her letter:

" *Tynemouth, May* 20, 1844.

" MY DEAR FRIEND:

" Your interest in this Lowell Book (the Lowell Offering) can scarcely equal mine; for I have seen the factory girls in their Lyceum, and have gone over the cotton mills at Waltham, and made myself familiar on the spot with factory life in New England; so that on reading the 'Offering,' I saw again in my memory the streets of houses built by the earnings of the girls, the church which is their property, and the girls themselves trooping to the mill, with their healthy countenances and their neat dress and quiet manners, resembling those of the tradesmen class on our country.

" My visit to Lowell was merely for one day, in company with Mr. Emerson's party, he (the pride and boast of New England as an author and philosopher) being engaged by the Lowell factory people to lecture to them, in a winter course of historical biography. Of course the lectures were delivered in the evening, after the mills were closed. The girls were then working seventy hours a week, yet, as I looked at the large audience, and I attended more to them than to the lecture, I saw no sign of weariness among any of them. There they sat, row behind row, in their own Lyceum, wainscoated with mahogany, the platform carpeted, and well lighted, provided with a handsome table, desk, and seat, and adorned with portraits of a few worthies; and as they thus sat listening to their lecturer, all wakeful and interested, all well dressed and lady-like, I could not but feel my heart swell at the thought of what such a sight would be with us.

" The difference is not in rank, for these young people were all daughters of those who earn their bread with their own hands. It is not in the amount of wages, however usual that supposition is, for they were then earning from one to three dollars a week besides their food; the children one dollar (4s. 3d.), the second-rate workers two dollars, and the best three; the cost of their dress and necessary comforts being much above what the same class expend in this country (England). It is not in the amount of toil, for, as I have said, they work seventy clear hours per week. The difference was in their superior culture. Their minds are kept fresh and strong, and free by knowledge and power of thought; and this is the reason why they are not worn and depressed under their labours.

" They begin with a poorer chance for health than our people; for the health of the New England women generally is not good, owing to circumstances of climate and other influences; but among the 3,800 girls in the Lowell Mills when I was there, the average of health was not lower than elsewhere, and the disease which was most mischievous was the same that proves most fatal over the whole country—consumption—while there were no complaints peculiar to mill life.

" At Waltham, where I saw the mills and conversed with the people, I had an opportunity of observing the invigorating effects of *mind* in a life of labor. Twice the wages, and half the toil, would not have made the girls I saw happy and healthy, without that cultivation of mind which afforded them perpetual support, entertainment, and motive for activity. They were not highly educated, but they had pleasure in books and lectures, in correspondence with home, and had their minds so open to fresh ideas as to be drawn off from thoughts of themselves and their own concerns. When at work, they were amused in thinking over the last book they had read, or in planning the account they should write home of the last Sunday's sermon, or with singing over to themselves the song they meant to practise in the evening; and when the evening came, nothing was heard of tired limbs and eagerness for bed, but, if it were summer, they sallied out the moment tea was over, for a walk, and if it were winter, to the lecture-room, or to the ball-room for a dance, or they got an hour's practice at the piano, or wrote home, or shut themselves up with a book. It was during the hours of work in the mill that the papers in the 'Offering' were meditated, and it was after work in the evening that they were penned.

" There is, however, in the case of these girls a stronger support, a more elastic spring of vigour and cheerfulness, than even an active and cultivated understanding. The institution of factory labour has brought ease of heart to many, and, to many, occasion for noble and generous deeds.

" The ease of heart is given to those who were before suffering in silent poverty, from the deficiency of profitable employment for women, which is even greater in America than with us. It used to be understood there that all women were maintained by the men of their family; but the young men of New England are apt to troop off into the west, to settle on new lands, leaving sisters at home.

" As for the noble deeds, it makes one's heart glow to stand in these mills and hear of the domestic history of some who are working before one's eyes, unconscious of being observed, or of being the object of any admiration. If one of the sons of a New England farmer shows a love for books and thought, the ambition of an affectionate sister is roused, and she thinks of the glory and honour to the whole family, and of the blessing to him, if he could have a college education. She ponders this, till she tells her parents, some day, of her wish to go to Lowell, and earn the means of sending her brother to college. The desire is yet more urgent, if the brother has a pious mind, and a wish to enter the ministry. Many a clergyman in America has been prepared for his function by the devoted industry of sisters; and many a scholar and professional man dates his elevation in social rank and usefulness from his sister's, or even some affectionate aunt's entrance into mill life for his sake. Many girls, perceiving anxiety in their fathers' faces, on account of the farm being encumbered, and age coming on without release from the debt, have gone to Lowell and worked till the mortgage was paid off, and the little family property free. Such motives many well lighten and sweeten labour, and to such girls labour *is* light and sweet.

"Some, who have no such calls, unite the surplus of their earnings to build dwellings for their own residence; six, eight, or twelve living together, with the widowed mother or elderly aunt of one of them, to keep house for, and give countenance to the party. I saw a whole street of houses so built, and owned, at Waltham; pretty frame houses, with the broad piazza and the green Venetian blinds, that give such an air of coolness and pleasantness to American village abodes. There is the large, airy eating room, with a few prints hung up, the piano at one end, and the united libraries of the girls, forming a good-looking array of books, the rocking-chairs, (universal in America,) the stove, adorned in summer with flowers, and the long dining-table in the middle. The chambers do not answer to our English ideas of comfort. There is a strange absence of the wish for privacy, and more girls are accommodated in one room than we should see any reason for in such comfortable and pretty houses.

"In the mills the girls have quite the appearance of ladies. They sally forth in the morning with their umbrellas, in threatening weather, their calashes to keep their hair neat, gowns of print or gingham, with a perfect fit, worked collars, or pellerines, and waistbands of ribbon.

"For Sundays and social evenings they have their silk gowns and neat gloves and shoes. Yet through proper economy—the economy of educated and thoughtful people—they are able to lay by money for such purposes as I mentioned above. The deposits in the Lowell Savings Bank were, in 1834, upwards of 114,000 dollars, the number of operatives being 5,000, of whom 3,800 were women and girls.

"I thank you for calling my attention back to this subject. It is one I have pleasure in recurring to. There is nothing in America which necessitates the prosperity of manufactures as of agriculture, and there is nothing of good in their factory system, that may not be emulated elsewhere—equalled elsewhere, when the people employed are so educated as to have the command of themselves and of their lot in life, which is always and everywhere controlled by mind far more than by outward circumstances.

"I am very truly yours,

"H. Martineau."

Who can *now* say that factory life in our country has an immoral tendency? Here are two disinterested witnesses, the one speaking from personal inspection, the other from the literary productions of the girls at Lowell, as published in the "Lowell Offering." We, too, have read this monthly periodical, and are abundantly impatient to give specimens of it to our readers; but our space is limited, and we have thought it best, before doing so, to introduce the testimony of the Rev. Mr. Scoresby in our last number, and Mr. Knight's and Miss Martineau's now, that our readers may become somewhat acquainted with "factory girls," and the impression they made upon our transatlantic visiters, before publishing the literary productions of factory life.

Fully confiding in the effect upon the public mind which the testimony we have offered will produce, it is our intention in our next number to let the young women of Lowell speak for themselves; and then we shall not be at all fearful to challenge Agriculture or Commerce to show us as much mind, as much taste, or as much fancy, from any of their *employees*, as we shall show them from among the Spindles.

But the pride we feel in all this is by no means the predominating sentiment. There is another and far higher gratification in the belief that the example of Lowell may produce an effect in Europe, and cause many now oppressed hearts, to rejoice in a new and improved state of existence.

If this shall prove no unfounded hope, then indeed will the "Lowell Offering" have been not only a source of happiness to those who have contributed to its columns, but an exceeding great reward to those whose wisdom and kindness have cared for the interesting flock they have called together.

GLANCE AT THE OLD WORLD.

Our foreign magazines and files, received by the last steamers, enable us to give our monthly *resume* of Literature, Science, and the Fine Arts, as they have advanced during the month succeeding that reviewed in our last number.

SCIENTIFIC.

We find, in the Edinburgh Philosophical Journal of July, an article by the Inspector General of Hospitals, Dr. Davy, being an account of some valuable and entertaining experiments performed at Ambleside, Westmoreland, of a meteorological character. The effects of radiation, the formation of ground ice, a phenomenon which every American miller has had occasion to notice at some time or other, the existence of glaciers in England at some remote period, the subjects of dew, hoarfrost, fog, &c., are treated with ability. Meteorology is attracting great and deserved attention abroad. We find, in the same number, a treatise on the unity of the human species, by M. De Serres, in which some ingenious arguments are used in favour of the idea, much stress being laid on the analogy prevailing in the comparative anatomy of the skin of the various races of men, and of the pigmental membrane, lying between the second epidermis and the true skin. This paper is put forth in support of the Bible account of the origin of man, and is one of a series of a similar character, most ably written, and by the same author.

An article on the climate of the United States, from the pen of the late Dr. Forry, of this city, is contained in this number, and is one of great value.

Phosphorescent rain has been observed in France by Dr. Deville, and his observations have been communicated to the French Academy.

Professor Ehrenberg, of Germany, has found infusoria in volcanic rocks;—a discovery of some interest to geologists. He has laid down the following propositions as the result of his long and laborious researches:—

1. That microscopic life, in the forms constituting earth and rock, appears to exist in the same manner over the whole earth.

2. That *everywhere*, in all climates, zones, elevations, depths, and in the smallest particles of *humus*, microscopic life not only exists but abounds.

3. That there is such a relation between European microscopic organisms, and those of other parts of the earth, that new orders, classes, and families, are nowhere found, but the forms all belong to the generally silicious and non-silicious.

4. There are also found in soil and calcareous strata everywhere, undecomposed parts of larger organisms, either silicious or calcareous, of vegetable and animal origin, closely resembling in character the flora or fauna of the localities.

5. There are peculiar local genera, not numerous, and also numerous peculiar species of widely distributed genera.

6. Certain geographical latitudes have their characteristic forms of minute animal life.

7. All over the earth there is distributed a considerable number of perfectly identical forms.

8. The so-called inorganic constituents of the body and shells of animalcules are chiefly carbon, silica, lime, and iron, with traces of alumina and manganese. Magnesia and other substances are only present as mechanical mixtures.

9. The quantity of iron in the minutest organisms is sometimes surprisingly great. It is never united with the lime, but only with the silica; and then rather mechanically than chemically, and as an organic deposite of the metal in closed silicious cells.

10. In consequence of the uniform and excessive development of minute organic life, it exerts a great influence on other conditions of the surface of the earth, and on the formation of humus in the valleys of rivers.

11. The influence of microscopic life is seen on a gigantic scale, in mountain and continent; and,

12. In the formation of the surface of the earth.

The value of these propositions was first recognized, in 1844, in this country; and the prominence given them in the Edinburgh Journal, induces us to quote them at length.

We notice a large number of new species of minerals described in the scientific journals of the Continent.

The British Admiralty is adopting the French Lighthouse System in the minutest details. A table has recently been published of the English lights, in which the name of each is given, the latitude, longitude, the number of lights, the color, the character, the height above the water, and, indeed, a general description. While all Europe is engaged in perfecting its respective lighthouse systems, our own remains in a most wretched condition, and all efforts for reform are, somehow or other, secretly met and overthrown. [We understand the New York Chamber of Commerce has the subject now before them, and that a report on the subject may be expected shortly from the pen of J. De Peyster Ogden, Esq.]

The English Government has erected a splendid observatory at Bombay.

The Arctic Expedition, under the command of Captain Sir John Franklin, had been heard from as late as the 4th of June last, bearing away to the northwest, with a favourable breeze, and at about sixty miles from the Orkneys. The two ships Erebus and Terror, were towed that far by the screw-propeller steam sloop Rattler, whose power and speed on this occasion induced Captain Franklin to express his belief in the entire success of the invention. The explorers will next be heard from at the edge of the ice, where the transport ship in company, will leave and return to England.

A new tea kettle has been invented in England, which differs from that now in use by having a concave bottom. Such is the accelerating effect of this form, that water may be boiled much sooner than in the ordinary way.

It is seriously proposed to tunnel the streets of London, for the purpose of conveying passengers more rapidly from one part of the city to the other. This plan, however, would be seriously in the way of the gas and water pipes, which traverse the town in all directions.

The enamelling of iron ware has been practised for some time in this country, but the process has been kept secret. We are now able to make public that which is used in England, and we trust that our iron founders will adopt it. Iron vessels, when thus coated on the inside, are the very best in the world for culinary purposes. The vessels to be coated are first cleaned, perfectly, with weak sulphuric acid, then washed with cold water, and dipped in a thin paste made with quartz, first melted with borax, feldspar, and clay, (free from iron,) reduced to an impalpable powder, and with sufficient water to form the paste. They are then powdered in the inside with a linen bag containing a very finely pulverised mixture of feldspar, carbonate of soda, borax, and a little oxide of tin. They are then dried, and heated in an enamelling furnace. The coating obtained is very white, and resists the action of fire and acid, or alkaline solutions.

It is asserted that the friction of jets of water, is so great as to reduce their height and force 2 1-2 per cent. for every forty lineal feet of hose.

The Civil Engineer and Architect's Journal, for June, contains an engraving of the engines used by the London Fire Brigade. It is worth looking at, by those who are engaged in investigating the subject of fires in cities, and the best modes of extinguishing them.

Human bones in the fossil state have been found in Brazil by Dr. Lund, a Danish naturalist.

The Rev. Dr. Scoresby, at the recent meeting of the British Association, produced a steel magnet, recently prepared under his direction, which decomposed water, deposited sulphur from a solution, emitted sparks by daylight, and gave forth audible sounds when the armature revolved once in sixteen seconds.

THE FINE ARTS.

The value of the Fine Arts in a mercantile sense is beginning to be duly estimated. The London Art Union, for July, has an interesting article in which this point is made prominent, by its notice of the Bazaar, and exposition of the products of British industry at Covent Garden. The engraved illustrations are very striking, and are well worthy of the notice of our own manufacturers. Never at any former period of the world, have the products of human labour been so exquisite and beautiful in their forms as at the present day. And what renders this an interesting fact is, that cheapness has gone hand in hand with production.

A national exposition, like that of Paris, is now seriously proposed in England. It is said that the French Exhibitors found that the advantage of this mode of advertising—for such it may be called—nearly compensated for the cost of the goods. The sales made to foreigners alone, doubled the whole expense of the building and attendants. The American Institute could gather some excellent hints for the management of their annual fair, upon consulting the article in the Art Union. An enthusiastic writer, in considering the influence of the Fine Arts upon human industry, says, "the long night of darkness, in which nations fought for shadows and derived their dreams of glory from violence and bloodshed, has gone down the sky."

We learn that in Munich a new mode of Fresco painting has been discovered, called Stereochromy, or fixed, penetrating fresco, which resists rain, snow, exposure to light, air, and acids. The labour of performing it is quite easy.

The Germans are much interested in the casting of statues in bronze. One of Mr. Huskisson, is in preparation at the celebrated foundry of Mueller.

The Museum at Frankfort-on-the-Maine has been enriched by the purchase of the celebrated Madonna with the four Evangelists, from the collection of the late Cardinal Fesch, at a cost of $12,500.

Leybold, a celebrated historical painter at Stutgard, died recently in that city.

The great Cathedral of Cologne will be entirely completed in the course of three years, a signal proof of the superiority of modern skill and aptitude.

All over Europe we find the exhibition of a deep love for the fine arts—a fellowship of admiration for the truly beautiful—which speaks volumes in favour of the progress of good taste and refinement, at least in certain classes.

We notice on the advertising page of this number of the Art Union, that a premium of $5,000 will be given for the best oil painting of the Baptism of Christ, as illustrated by Milton in Paradise Regained, 1st Book, lines 79 to 86. Two years are allowed for its completion; and we perceive no limitation to competitors in any country. We hope some of our American artists will enter the field of competition. We think Leutze, Huntington, Chapman, and Inman, might well aim at the prize.

LITERARY.

The romantic life and character of Lady Hester Stanhope, as illustrated by herself in her conversations with her physicians, together with anecdotes of the most remarkable persons of her time, are the subjects of three volumes announced by Colburn. With these we are to have the memoirs of Sophia Dorothea, the wife of George the 1st of England, throwing an entirely new light upon the story of her passion for Count Konigsmark, and giving a picture of Court life in the last century, "to which no imagination can do justice."

Mrs. Gore, a charming English writer, appears with a new work before the public, "The Story of a Royal Favourite;" and Horace Smith, has another, called "Love and Mesmerism."

We perceive that a work is announced in London, being a reprint of Marquette's discovery of the Mississippi, Paris, 1681, of which only sixty copies will be published.

The first number of the work of Alexander W. Humboldt, called "Cosmos; a Survey of the General Physical History of the Universe," has appeared in London.

Among the deaths which have recently affected the literary world, are those of Lady Stepney and Regina Maria Roche. We do not remember to have seen any particular allusion to them in any of our leading periodicals. Lady Stepney was at one time a brilliant light of fashion, "the cynosure of every eye." She was a handsome, as well as a clever woman, and her portrait was one which ornamented many British magazines and annuals. When she was Mrs. Robert Manners, she published "Castle Nuovier; or, Henry and Adeline," "The Lords of Earth," and, as Lady Stepney, the popular novels of "The New Road to Ruin," "The Courtier's Daughter," and "The Three Peers."

Mrs. Roche died recently, at the age of 81 years, after a long retirement from the world. Her celebrated novel of "The Children of the Abbey" made a prodigious sensation, and was a universal favourite about half a century ago. We have a list of about ten other romances of her composition, but the chief of them are "The Vicar of Lansdowne," "The Monastery of St. Columb," and "Trecothick Bower," which are well known to American novel readers.

One of the heroines of Burns—for there were many—Mrs. Smythe, (Euphemia Murray,) recently died at Edinburgh. She was known as the Flower of Strathmore, and the lyric which immortalized her, begins with the words

"Blythe, blythe and merry was she."

Miss Peake has a new novel in the press called "Jealousy and Revenge," and some one perpetrates the anonymous, in a romance called "The Zitana."

Mrs. Childs's letters from New York are much admired by her English readers.

The Rev. W. Metcalfe, of Oxford, is engaged in illustrating the private life and manners of the Greeks and Romans. Two of his volumes have appeared.

We find a learned article in the London Athenæum from Professor Robinson, of this city, explaining the *locale* of the City of Ephraim, mentioned in John xi, 54.

Major Rawlinson has written the Bombay Asiatic Society, that he has mastered the whole Cuneiform, or arrow-headed inscription at Besitum, in Persia; and that he has obtained some valuable historical information with regard to the campaigns of Darius Hytaspes.

The enthusiasm in favour of vocal talent can no longer be considered a trait of southern climes. Jenny Lind, a favourite northern singer, recently returned to Stockholm after a long absence. Twenty thousand people assembled at the wharf where she was to disembark; the bay was covered with boats decked in the gayest manner; the orchestra of the Theatre Royal, and all the musical amateurs of the city, went out in a steamer to meet her on her arrival and marshal her into port. When she landed she was cheered for "twenty minutes." She stepped into a carriage drawn by six white horses, which were soon displaced by the principal young men of the city. As she passed through the streets, she was saluted with the waving of handkerchiefs and the flinging of crowns and bouquets at her feet. The military bands of the army marched before her, and an immense crowd of equestrians and pedestrians followed, while the air was rent with shouts and "Huzzas for Jenny Lind!" This is a curious incident, and we write it down. Posterity *may* wonder at the occurrence.

Thomas Moore is writing the life of the late Rev. Sidney Smith.

No. 22 of Murray's Home and Colonial Library contains the first part of the Journal of Researches in Natural History, kept during a voyage round the world by Charles Darwin.

The Rev. R. H. Barham, a Minor Canon of St. Paul's, has recently died. He was a popular humourist, and contributed to Blackwood the amusing chapters of "Cousin Nicholas."

One John Clark, of Bridgewater, England, has invented a machine for composing Latin Hexameter verse!!

Lyell's Geological Tour is published, and will be reprinted immediately in this country.

IRON TRADE OF ENGLAND.

We have carefully examined the London Mining Journal of the 14th, 21st, and 28th June, for any thing satisfactory on the subject of the iron trade; but have found nothing to give to our friends in that business upon which they can rely for the future.

So much appears to depend upon what may be the action of Parliament upon the numerous petitions now before that body for the construction of new rail roads, that the iron trade is in a very unsettled state.

The Journal above named of the 14th June says, "we have taken some pains to acquire accurate information as respects the iron trade; but we find much difficulty in arriving at conclusions such as would warrant us in placing before our readers, any distinct features of a general nature, so varied are the positions in which the several districts are placed. It was only last week that we adverted to the 'time' speculations in pig iron, which particularly applied to Scotland, while from the inability of the 'bulls' or buyers of stock to pay at the period fixed for delivery, a reduction naturally took place. Nevertheless, the prices of iron were maintained in the Staffordshire, Derbyshire, and North and South Wales districts, except so far as the reduction which it had been considered prudent to make—the rise having been too rapid to be justified even by the increased demand, while it was calculated materially to injure the iron master in the end, from the advanced wages he would have been compelled to give, and to reduce which, with the reduction in the price of the article, would have been attended with much difficulty; hence the movement on the part of the iron masters, which must have the hearty concurrence of all, whether they consider the interest of the operative, or working miner, or collier, the smelter, the merchant, or consumer. It was our intention this week to have given a statistical table of the prices of Welsh bars at Newport, 'pigs' at Newport, and tin plates at Bristol, for the last twenty years, having been favoured with a tabular statement showing the changes in price which these articles have undergone, but we must needs defer its insertion till our next—in the mean time we may take one or two instances of the sudden transitions and revulsions which the iron trade has undergone, trusting that some of our correspondents associated with the trade, will take up the subject and offer some remarks on the anomaly, if we may use the expression, which the table presents. In July, 1823, we find bars were selling at Newport at £7 per ton; in eighteen months afterwards, that is to say, in January, 1825, they are quoted at £14 per ton—and here we might stop had we space for the adducing of argument, as regards the immense difference which these prices present, with reference to the production of bar iron in South Wales alone; or rather we may say the prices obtained at Newport—eighteen months having effected a rise of 100 per cent. To progress, we next arrive at the year 1831, some six years forward, when the price of bars had fallen to £5 per ton, being a reduction of nearly two-thirds in the price of the article, which thus appears to have fallen from £14 per ton to £5. From that period to April, 1836, it again rallied, varying from £5 to £11 per ton, after which, it was again depressed, the price quoted in August, 1837, being £6. Again a reaction took place, and in March, 1838, we find it £10 per ton; but in 1843, it again decreased below even any price we have cited, and we find £4 per ton the quotation of the day; from that time a gradual advance has taken place, and from the statement with which we have been favoured, the price quoted for March, in the present year, is £10. We have omitted until next week the tabular statement to which we have referred, when we shall be induced to offer some observations on the iron trade, its position, and prospects.

"We may, in closing our remarks, observe, that the decline in Scotch pigs has had an effect upon Staffordshire bars; and although the large houses are not disposed at present to make any reduction, yet the market cannot be said to maintain the firmness it has displayed during the past few weeks."

The only article we find in the same Journal of the 21st on the subject of iron, is as follows, no tabular statement being given, either in that number or the one of the 28th ultimo:

"We learn that sales of bar iron have been effected at Newport as low as £7 5s. per ton. The demand from abroad has fallen off, and the price is looking down, while several of the smaller houses are forcing sales. The home market is better supported and prices maintained. As regards Scotch pigs, the 'time bargains' have had a serious effect; but there is evidently an improvement, and more legitimate business doing."

In the same paper, under date of June 28th, we find nothing about the Iron Trade but what follows:

"We are sorry we cannot announce any amendment in the Iron Trade, or an indication of the hands who have turned out to return to their employment. Another crisis, similar to former ones, seems fast approaching, evidently from the unhealthy and extravagant prices which iron had reached some two or three months since, viz.: £14 per ton, while, at the present time, it is difficult to know its market value. With abundance of orders from Canada and America, the manufacturers in iron, particularly in heavy goods, in Wales, Wolverhampton, &c., are in a dilemma, in common with the iron masters, although the execution of their undertakings cannot be delayed; and travellers, from the uncertainty of the price of iron, cannot take orders for goods to be manufactured. During the high price of iron, the masters, with a praiseworthy regard for their men, raised their wages to a scale which would insure them the comforts of life ; but now, on so serious a reduction, the men are beginning to grumble at the bare idea of a reduction of their wages, and a turn-out of the workmen and colliers has taken place at Bilston, which, it is feared, will extend its mischievous effects to other districts. Delegates from the north have harangued the misguided men, and resolutions have been come to, that they will remain firm in the turn-out. One singular and anomalous feature in this case is, that, in some districts, the men are waiting to prevent a reduction in wages, and, in others, to enforce an increase. The only occasion of any thing serious having taken place, has been a riot at Bilston, when a workman was rescued from the police ; but, in general, although bodies of men are patrolling the roads, all remain quiet."

The prices current under the same date, June 28, are as follow :

Iron Bars, Wales	£7	10	to	£8	0
Nail Rods	0	0		9	10
Hoop (Staf.)	10	15		11	0
Sheet	11	15		12	0
Bars	0	0		10	10
Scotch Pig, Clyde	3	0		3	5

COPPER MINES ON LAKE SUPERIOR.

The Lake Superior Copper Mining Company, better known as the "Boston Company," is under the entire superintendence of Col. Charles H. Gratiot. This location is situated to the west of Fort Wilkins, about eighteen or twenty miles, through which runs, north and south, the Eagle river. This company have now in operation three shafts. The first is seventy-four feet deep, and the vein twenty-three feet wide. The second is thirty-five feet deep, and the vein twenty-two feet wide. The third is thirty-one feet deep and the vein six feet wide, and each of these three veins exceeds two and a half miles in length! The veins are all within half a mile of each other, and produce silver and copper averaging from 60 to 70 per cent. They now have on hand, thrown up from the shafts, some 400 tons, which will be ready for shipment to the Boston market by the 1st of September next.

Col. Gratiot has under him nearly 125 men, who are now busily engaged in erecting pounders and crushers, under which passes the trap rock in which the ore is found. The ore, after this process, is taken and washed in large wire sieves, which separates the rock from the metal: it is then dried, and put into kegs weighing from 300 to 500 pounds and ready for market.

One thing is very certain, that copper can never be smelted in the Lake Superior country without great and unnecessary expense. The chemical laboratories at the East, prefer purchasing the ore in kegs. One house alone in Boston will use fifty tons per week. The Pittsburgh Company, last week, at a blast, threw up a beautiful specimen of the black oxide of copper, weighing from 12 to 1300 pounds. It is seven feet long, three feet wide, and two feet thick, and will yield over 60 per cent. of copper.

IMPORTATION

OF NON-ENUMERATED ARTICLES OF FOREIGN MERCHANDIZE INTO THE UNITED STATES.

In a notice in our number for July, of the last Report of the Treasury Department, on the Commerce and Navigation of the United States, we alluded to the fact, that over thirteen and a half millions of dollars, or about one-eighth of the amount of imports for the year ending June 30, 1844, consisted of non-enumerated articles, or merchandize not specified or described in the Report referred to. We have since examined the Annual Reports on Commerce and Navigation of the Treasury Department for the last fifteen years, and find the amount of non-enumerated articles annually imported so large, that we are induced to present the following table of those imports, made up from the official documents referred to.

To this statement we beg leave to call the attention of Members of Congress, and others having a control over these public documents, and to ask if the great interests of American Industry, which are protected or intended to be protected, by our Tariff laws, have not a right to know, from the official sources, what is the amount and value of each article annually imported into the United States? Such radical defects and omissions as we now complain of, are not, we venture to say, to be found in the documents from the Treasury Department annually reported to the Parliament of Great Britain and Ireland; items of even minor importance being stated in the list of imports: while, in our Treasury Reports, many important articles of manufacture, as well as raw materials used in the arts, the products of mines, agriculture, &c., are placed under the general head of non-enumerated articles.

The following table shows that, during the fourteen years and nine months ending June 30, 1844, the imports of non-enumerated articles into the United States amounted to over *one hundred and fifty-one millions of dollars*, of which over *ninety millions* were imported free of duty, and nearly *sixty-one millions* were articles which paid duties. It will be recollected that the Compromise Tariff Act was passed in March, 1833, by which the list of articles free of duty was greatly extended; and it cannot fail to be observed how largely the amount of non-enumerated articles imported, particularly those free of duty, increased from that period.

Abstract from the Reports of the Secretary of the Treasury of Imports of non-enumerated articles into the United States, from September 30, 1830, *to June* 30, 1844:—

Year ending	Free of Duty.	Paying Duties ad valorem.	Total.
Sept. 30, 1830	$8,787	$4,044,507	$4,053,294
1831	35,171	5,215,693	5,250,864
1832	31,650	5,831,361	5,863,011
1833	4,963,065	3,352,600	8,315,665
1834	26,647,645	2,454,719	29,102,364
1835	7,913,973	3,844,527	11,758,500
1836	8,257,809	4,644,395	12,902,204
1837	8,423,674	2,835,735	11,257,409
1838	5,033,607	2,046,489	7,080,096
1839	8,707,402	4,097,145	12,804,547
1840	5,849,116	2,149,085	7,998,201
1841	6,858,293	2,491,801	9,350,094
1842	3,123,358	5,115,523	8,238,881
June 30, 1843 (9 mos.)	1,399,863	2,235,259	3,635,122
1844 (year)	3,024,643	10,622,670	13,647,313
Total	$90,278,056	$60,981,509	$151,259,565

The average of non-enumerated articles imported annually is over ten millions of dollars, of which six millions annually, on an average, have come in free of duty. The total amount of imports during the above period was $1,774,847,100—of course, over one-twelfth of the imports were non-enumerated articles.

It should be observed that all of these non-enumerated articles were either admitted free of duty, or on payment of duties *ad valorem;* all of the articles paying *specific duties* having been specified in the Treasury Reports each year.

The following is a statement of the total amount of Imports into the United States during the period above referred to:—

Year.	Free of Duty.	Paying Duty.	Total Imports.
1830	$12,746,245	$58,130,675	$70,876,920
1831	13,456,625	89,734,499	103,191,124
1832	14,249,453	86,779,813	101,029,266
1833	32,447,950	75,670,361	108,118,311
1834	68,393,180	58,128,152	126,521,332
1835	77,940,493	71,955,249	149,895,742
1836	92,056,481	97,923,554	189,980,035
1837	69,250,031	71,739,186	140,989,217
1838	60,860,005	52,857,399	113,717,404
1839	76,401,792	85,690,340	162,092,132
1840	57,196,204	49,945,315	107,141,519
1841	66,019,731	61,926,446	127,946,177
1842	30,627,486	69,534,601	100,162,087
1843 (9 mos.)	35,574,584	29,179,215	64,753,899
1844 (year)	24,766,881	83,668,154	108,435,035
Total	$731,987,141	$1,042,859,959	$1,774,847,100

TONNAGE.

Statement exhibiting a condensed view of the Tonnage of the several districts of the United States on the 30th of June, 1844.

DISTRICTS.	Registered tonnage.	Enrolled and licensed tonnage.	Total tonnage of each district.
	Tons and 95ths.		
Passamaquoddy..... Maine	3,298 15	5,878 16	9,176 31
Machias..... do	1,037 94	13,057 40	14,095 39
Frenchman's Bay..... do	1,714 58	17,904 74	19,619 37
Penobscot..... do	5,521 31	21,959 39	27,480 70
Belfast..... do	11,134 73	24,253 79	35,388 57
Waldoborough..... do	18,621 68	38,735 81	57,357 54
Wiscasset..... do	5,342 58	9,558 82	14,901 45
Bath..... do	38,938 85	18,891 02	57,829 87
Portland..... do	40,845 89	56,501 88	57,347 82
Saco..... do	1,544 35	2,176 67	3,721 07
Kennebunk..... do	4,882 80	2,374 11	7,256 91
York..... do	....	1,155 72	1,155 72
Burlington..... Vermont	....	2,762 86	2,762 86
Portsmouth..... New Hampshire	14,645 74	8,279 50	22,925 29
Newburyport..... Massachusetts	16,162 65	4,910 55	21,073 25
Ipswich..... do	....	2,051 56	2,051 56
Gloucester..... do	2,681 76	13,161 91	15,843 72
Salem..... do	21,931 74	12,322 32	34,254 11
Marblehead..... do	1,526 47	8,099 81	9,626 33
Boston..... do	175,330 52	35,554 47	210,885 04
Plymouth..... do	6,825 74	9,039 30	15,865 09
Fall River..... do	2,716 22	4,954 00	7,670 22
New Bedford..... do	94,747 26	9,381 02	104,128 28
Barnstable..... do	5,995 25	34,212 38	40,207 63
Edgartown..... do	6,956 52	1,131 37	8,087 89
Nantucket..... do	27,749 39	3,765 15	31,514 54
Providence..... Rhode Island	16,476 63	5,515 54	21,992 22
Bristol..... do	12,454 81	2,482 14	14,937 00
Newport..... do	6,447 00	4,795 94	11,242 94

DISTRICTS.	Registered tonnage.	Enrolled and licensed tonnage.	Total tonnage of each district.
	Tons and 95ths.		
Middletown......Connecticut..........	1,082 58	9,539 31	10,621 89
New London.........do..............	28,125 68	9,640 39	37,766 12
Stonington...........do..............	6,012 80	4,830 30	10,843 15
New Haven..........do..............	5,152 39	6,283 17	11,435 56
Fairfield.............do..............	713 93	10,793 30	11,507 28
Champlain.......New York...........	....	3,192 34	3,192 34
Sackett's Harbor......do..............	....	3,055 23	3,055 23
Oswego..............do..............	....	9,387 89	9,387 89
Niagara..............do..............	....	12 49	12 49
Genesee..............do..............	....	235 05	235 05
Oswegatchie..........do..............	....	1,022 03	1,022 03
Buffalo Creek.........do..............	....	20,822 23	20,822 23
Sag Harbor...........do..............	19,618 59	6,068 32	25,686 91
New York............do..............	253,888 23	271,273 75	525,162 03
Cape Vincent.........do..............	....	2,720 51	2,720 51
Perth Amboy.....New Jersey.........	218 09	19,538 50	19,756 59
Bridgetown...........do..............	227 30	10,449 59	10,676 89
Burlington............do..............	....	4,104 66	4,104 66
Camden..............do..............	....	5,429 28	5,429 28
Newark..............do..............	552 86	13,015 01	13,567 87
Little Egg Harbor.....do..............	....	4,738 89	4,738 89
Great Egg Harbor.....do..............	....	10,409 53	10,409 53
Philadelphia.....Pennsylvania.........	40,295 59	74,599 24	114,894 83
Presqu'isle...........do..............	....	4,213 46	4,213 46
Pittsburg............do..............	....	9,232 71	9,232 71
Wilmington........Delaware..........	2,209 63	3,878 39	6,088 07
Newcastle............do..............	....	4,824 16	4,824 16
Baltimore.........Maryland...........	41,541 40	34,961 72	76,503 17
Oxford..............do..............	....	9,861 28	9,861 28
Vienna..............do..............	337 75	12,178 55	12,516 35
Snow Hill............do..............	....	6,613 50	6,613 50
St. Mary's............do..............	....	1,778 66	1,778 66
Town Creek..........do..............	....	1,574 16	1,574 16
Annapolis............do..............	....	2,492 19	2,492 19
Georgetown..District of Columbia......	2,633 68	6,367 11	9,000 79
Alexandria...........do..............	6,591 47	3,945 48	10,537 02
Norfolk...........Virginia............	19,034 84	8,515 46	18,550 35
Petersburg...........do..............	948 76	698 39	1,647 80
Richmond............do..............	3,514 47	4,536 88	8,051 40
Yorktown............do..............	....	2,001 35	2,001 35
East River...........do..............	....	3,219 52	3,219 52
Tappahannock........do..............	406 93	4,383 46	4,790 44
Folly Landing........do..............	....	2,931 50	2,931 50
Yeocomico...........do..............	....	3,227 27	3,227 27
Cherrystone..........do..............	....	1,495 37	1,495 37
Wheeling............do..............	....	1,340 18	1,340 18
Wilmington....North Carolina.........	11,222 54	3,504 65	14,727 24
Newbern............do..............	1,558 90	2,416 31	3,975 26
Washington..........do..............	1,267 12	2,215 02	3,482 14
Edenton.............do..............	158 03	1,060 77	1,218 80
Camden..............do..............	802 64	8,173 92	8,976 61
Beaufort.............do..............	254 80	1,401 49	1,656 34
Plymouth............do..............	898 14	1,015 83	1,914 02
Ocracoke............do..............	....	1,088 45	1,088 45
Charleston.....South Carolina........	9,445 87	9,864 15	19,310 07
Beaufort.............do..............	....	329 92	329 92
Georgetown..........do..............	566 44	941 68	1,508 17
Savannah.........Georgia............	8,132 17	6,492 41	14,624 58
Sunbury.............do..............	....	....	....
Brunswick...........do..............	698 07	779 66	1,477 73

DISTRICTS.		Registered tonnage.	Enrolled and licensed tonnage.	Total tonnage of each district.
		Tons and 95ths.		
Hardwick	Georgia	....	....	....
St. Mary's	do	765 52	237 30	1,002 82
Pensacola	Florida	1,066 67	866 89	1,933 61
St. Augustine	do	396 62	212 46	609 13
Apachicola	do	....	3,090 24	3,090 24
St. Mark's	do	....	142 18	142 18
St. John's	do	....	309 13	309 13
Key West	do	2,443 82	1,049 15	3,493 02
Mobile	Alabama	3,827 33	11,387 11	15,214 44
Pearl River	Mississippi	....	1,341 10	1,341 10
New Orleans	Louisiana	55,620 88	105,422 04	161,042 92
Teche	do	....	726 01	726 01
Nashville	Tennessee	....	5,668 78	5,668 78
Louisville	Kentucky	....	7,114 44	7,114 44
Cuyahoga	Ohio	....	14,196 84	14,196 84
Sandusky	do	....	2,407 22	2,407 22
Cincinnati	do	....	13,139 39	13,139 39
Miami	do	....	2,371 52	2,371 52
Detroit	Michigan	....	14,901 17	14,901 17
Michilimackinac	do	....	498 75	498 75
St. Louis	Missouri	....	16,664 53	16,664 53
Total		1,068,764 91	1,211,330 11	2,280,095 07

SUMMARY STATEMENT OF THE TONNAGE OF THE UNITED STATES ON THE 30TH JUNE, 1844.

		Tons and 95ths.
Registered Tonnage.		
Registered vessels employed in the foreign trade		1,068,764 91
Enrolled and Licensed Tonnage.		
Enrolled vessels employed in the coasting trade	1,078,867 62	
Licensed vessels, under 20 tons, in the coasting trade	30,746 77	
		1,109,614 44
Fishing Vessels.		
Enrolled vessels employed in cod fishing	78,178 86	
Do do employed in the mackerel fishery	16,170 66	
Do do employed in the whale fishery	320 14	
Licensed vessels, under 20 tons, employed in the cod fishery,	7,045 86	
		101,715 62
		2,280,095 07
Registered and enrolled vessels employed in whale fishery,	168,293 63	
Aggregate amount of tonnage of the United States		2,280,095 07

Whereof—	Permanent.		Temporary.	
Registered tonnage	859,008 30		209,756 61	1,068,769 91
Enrolled & licensed do	1,171,437 58		2,099 80	1,173,537 38
Licens'd ton'age under 20 tons (coasting trade)	30,746 77	(cod fishery)	7,045 86	37,792 63

Of the enrolled and licensed tonnage there were employed—

In the coasting trade	1,078,867 62
In the mackerel fishery	78,178 86
In the cod fishery	16,170 66
In the whale fishery	320 14
	1,171,537 38

Steam Navigation.

Of enrolled and licensed tonnage employed in the coasting trade, amounting to 1,078,867 tons, as above stated, there were in steam navigation, 265,269 86

Tonnage entered and cleared from the U. S. during the year ending June 30, 1844.

	AMERICAN.		FOREIGN.		TOTAL.	
	No. of Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
Entered	8,148	1,977,438	5,577	916,992	13,725	2,894,430
Cleared	8,343	2,010,924	5,500	906,814	13,843	2,917,738

STATEMENT OF THE COMMERCE OF EACH STATE AND TERRITORY,

from the 1st of July, 1843, *to the 30th of June,* 1844.

STATES AND TERRITORIES.	VALUE OF EXPORTS.							VALUE OF IMPORTS.		
	Domestic Produce.			Foreign Produce.			Total of domestic and foreign produce.	In American vessels.	In Foreign vessels.	Total.
	In American vessels.	In Foreign vessels.	Total.	In American vessels.	In Foreign vessels.	Total.				
Maine,	$1,031,281	$133,683	$1,164,964	$246	$10,925	$11,171	$1,176,135	500,242	$70,552	$570,824
New Hampshire,	4,040	1,954	5,994	662	28	690	6,684	27,185	4,235	31,420
Vermont,	196,574	....	196,574	216,793	....	216,793	413,367	97,183	....	97,183
Massachusetts,	5,734,949	636,887	6,371,836	2,371,973	352,477	2,724,450	9,096,286	15,444,060	4,851,947	20,296,007
Rhode Island,	202,608	54,994	257,602	3,175	....	3,175	260,777	265,825	3,612	269,437
Connecticut,	745,773	52,952	798,725	1,291	....	1,291	800,016	317,135	6,164	323,299
New York,	20,378,600	5,630,577	26,009,177	5,194,108	1,658,255	6,852,363	32,861,540	58,315,222	6,764,294	65,079,516
New Jersey,	13,889	....	13,889	4,300	....	4,300	18,189	....	17,670	17,670
Pennsylvania,	3,032,598	232,429	3,265,027	251,491	18,738	270,229	3,535,256	6,833,300	383,967	7,217,267
Delaware,	125,771	....	125,771	406	....	406	126,177	8,093	....	8,093
Maryland,	3,837,106	1,004,844	4,841,950	263,822	27,394	291,216	5,133,166	3,659,794	257,956	3,917,750
District of Columbia,	410,515	139,783	550,298	6,061	3,193	9,254	559,552	44,385	21,243	65,628
Virginia,	2,594,394	328,844	2,923,238	19,041	....	19,041	2,942,279	226,328	41,326	267,654
North Carolina,	263,440	34,961	298,401	....	....	....	298,401	196,227	12,915	209,142
South Carolina,	3,202,386	4,227,199	7,429,585	871	2,826	3,697	7,433,282	792,560	338,955	1,131,515
Georgia,	1,708,782	2,575,023	4,283,805	....	....	....	4,283,805	213,701	91,933	305,634
Alabama,	4,970,440	4,935,755	9,906,195	....	1,459	1,459	9,907,654	246,955	195,863	442,818
Louisiana,	20,324,093	9,118,641	29,442,734	409,761	645,812	1,055,573	30,498,307	6,693.573	1,133,216	7,826,789
Mississippi,	....	....	....	....	....	....	....	....	....	....
Tennessee,	....	....	....	....	....	....	....	....	....	....
Missouri,	....	....	....	....	....	....	....	25,627	....	25,627
Ohio,	97,954	445,902	543,856	....	....	....	543,856	31,510	4,505	36,015
Kentucky,	....	....	....	....	....	....	....	19,379	....	19,379
Michigan,	293,991	....	293,901	....	....	....	293,901	120,673	....	120,673
Florida Territory,	537,281	454,376	991,657	153	19,606	19,759	1,011,416	95,716	59,979	155,695
Total	69,706,375	30,008,804	99,715,179	8,744,154	2,740,713	11,484,867	111,200,046	94,174,673	14,260,362	108,435,035

INTERNAL IMPROVEMENTS.

STATE OF NEW YORK.

In our last number we gave some statements from the Annual Report of the Commissioners of the Canal Fund of the State of New York, made to the Legislature on the 7th May, 1845, exhibiting the Trade, Tolls, and Tonnage of the New York Canals, for the year 1844, and several preceding years. We now continue our extracts from the same document, accompanied with such remarks as the statements suggest to us.

The total tonnage of all the property transported on all the State Canals, ascending and descending, its value, and the amount of tolls collected for the nine years preceding, is as follows, viz:—

Year.	Tons.	Value.	Tolls.
1836	1,310,807	$67,634,343	$1,614,342
1837	1,171,296	55,809,288	1,292,623
1838	1,333,011	65,746,559	1,590,911
1839	1,435,713	73,399,764	1,616,382
1840	1,416,046	66,303,892	1,775,747
1841	1,521,661	92,202,929	2,034,882
1842	1,236,931	60,016,608	1,749,196
1843	1,513,439	76,276,909	2.081,590
1844	1,816,586	92,750,874	2,446,374

COMPARISON OF THE CANAL TONNAGE OF THE PRODUCE OF THE STATE OF NEW YORK WITH THAT OF WESTERN STATES.

Tonnage arriving at tide water, on the Hudson River, the Produce of the State of New York by way of the Erie Canal, including the contributions of the lateral Canals.

Year.	Products of the Forest. Tons.	Agriculture. Tons.	Other articles. Tons.	Total. Tons.
1836	208,779	117,870	38,257	364,906
1837	174,007	98,172	59,072	331,251
1838	189,733	101,053	46,230	336,016
1839	151,075	63,713	33,799	264,596
1840	119,352	159,823	30,001	309,167
1841	192,122	92,483	23,739	308,344
1842	125,623	102,030	31,019	258,672
1813	202,810	124,313	51,846	378,969
1844	288,786	135,171	67,834	491,791
Total	1,658,287	994,628	390,797	3,043,712

Tonnage arriving at tide water, by way of the Erie Canal, the produce of Western States, and Canada, coming in at Buffalo, Black Rock, and Oswego.

Year.	Products of the Forest. Tons.	Agriculture. Tons.	Other articles. Tons.	Total. Tons.
1836	5,400	48,000	819	54,219
1837	7,637	47,546	1,072	56,255
1838	9,231	72,972	1,030	83,233
1839	28,644	91,369	1,658	121,671
1840	21,241	134,600	2,307	158,148
1841	45,398	173,437	5,341	224,176
1842	31,069	185,898	4,510	221,477
1843	36,775	214,655	4,946	256,376
1844	68,088	236,155	3,782	308,025
	253,483	1,204,632	25,465	1,483,580

The preceding tables show that the annual average of tonnage of the produce of the State of New York, which came to tide water in the Erie Canal, for the five years, from 1836 to 1840 inclusive, was 321,187 tons, and for the four years, from 1841 to 1844 inclusive, the annual average was 359,444 tons; while the tonnage of the produce of Western States and Canada, for the first period, averaged 94,705 tons annually, and for the latter period the annual average was 252,513 tons. The increase of tolls and tonnage on the Erie Canal, therefore, depends mainly on the trade from the Western States and Canada.

CANAL TOLLS.

The following statement shows on what articles the principal amount of Tolls is paid:—

Flour	$680,955	Pot and Pearl Ashes	$55,490
Wheat	135,756	Salt	62,639
Other vegetable food	86,541	Other manufactures	45,850
Beef and Pork	56,925	Mineral Coal	49,845
Cheese, Butter, and Lard	39,978	Gypsum	8,397
Wool	9,619	Stone, Lime, and Clay	12,333
Boards and scantling	199,112	Merchandize	585,147
Timber	26,142	Tolls on boats	178,222
Shingles and Staves	66,333	Do. on passengers	13,656
Firewood	15,007		

Total Tolls on products of Agriculture			$1,009,773
"	"	" of the Forest	363,547
"	"	on Manufactures	123,061
"	"	on Merchandize	585,147
"	"	on other articles	172,968
"	"	on Boats and Passengers	191,878
Total Tolls			$2,446,374

The Tolls paid on the total movement of each class of articles, and upon boats and passengers, annually, from 1837 to 1844 inclusive, are as follows:—

Year.	Boats and passengers.	Products of the Forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837	$195,508	$211,118	$370,041	$75,507	$380,826	$56,430	$1,289,430
1838	210,457	[illegible]	469,495	74,941	526,911	78,555	1,589,357
1839	181,323	253,710	479,534	81,251	535,486	83,662	1,614,966
1840	185,022	197,904	808,623	75,765	427,966	80,467	1,775,747
1841	179,819	313,414	785,943	95,595	558,003	102,078	2,034,852
1842	165,515	211,979	805,376	70,611	393,875	101,840	1,749,196
1843	156,004	290,755	922,710	93,231	502,617	116,273	2,091,590
1844	191,878	363,547	1,009,773	123,061	585,147	172,968	2,446,374
Total for 8 years	$1,465,526	$2,072,455	$5,650,495	$689,962	$3,910,831	$792,273	$14,581,542
Yearly average	$183,191	$259,059	$706,312	$86,244	$488,854	$99,034	$1,822,693
Do. 1st 4 years	193,077	223,182	531,673	76,866	467,797	74,778	1,567,373
Do. last 4 years	173,304	294,931	880,950	95,624	509,910	123,290	2,078 009

The annual average of the Tolls paid on the total movement of articles, and upon boats and passengers, is as follows:—

From 1837 to 1840, 4 years	$1,567,373
From 1841 to 1844, 4 years	2,078,009
Increase	$510,636

Increase of Tolls on products of the Forest		$71,749
Do.	" on Agriculture	349,277
Do.	" on Manufactures	18,758
Do.	" on Merchandise	42,113
Do.	" on other articles	48,512
		$530,409
Decrease of Tolls on Boats and Passengers		19,773
Net increase as above		$510,636

It may be remarked that while the tolls and tonnage of products of the forest may be expected to decrease for future years, the deficiency will probably be more than made up by the tolls on mineral coal, now classed under the head of "other articles," the trade in which, on the Canals, is yet in its infancy; but the consumption of this important article of fuel is rapidly increasing in the towns and villages in the interior of the State. On many of the products of agriculture, of the mines, on manufactures, and on merchandise, an increase for the future, in the quantities transported on the Canals, may be also calculated on in proportion to the increase of population.

But it is principally with reference to the extension of trade with the Western States, as the population of that section of the United States increases, and avenues of communication by Canals and Railroads are opened, between the lakes and the waters of the Ohio and the Mississippi rivers, that we may safely estimate an immense increase to the already overflowing trade with which the Erie Canal is favored, as the best channel for transportation between the Western waters and the Atlantic.

The following lines of Canal navigation have been constructed, and are now in operation, connecting the waters of Lake Erie with those of the Ohio river:—

		Miles.
Ohio Canal and Branches,	length	407
Miami Canal and Branch	do	198
Wabash and Erie	do	226
Muskingum improvement	do	91
Mahoning or Pennsylvania and Ohio Canal	do	85
Erie extension	do	136
Total		1143

It thus appears that eleven hundred and forty-three miles of canal and slack-water navigation are now in operation, intersecting the fertile regions of Western Pennsylvania, Ohio, and Indiana, and that these communications are directly tributary to the Erie Canal, and the revenues and commerce of the State of New York. Of this extensive inland commerce, destined to exceed that of any part of the globe, the city of New York is and must continue to be the principal mart. The length of the Erie Canal being 364 miles, we have now completed, by the enterprise and resources of the States of New York, Pennsylvania, Ohio, and Indiana, over fifteen hundred miles of canal navigation between the Hudson and the Ohio rivers, (exclusive of the lateral canals of New York,) and by means of those rivers and Lake Erie, forming a continuous chain of inland communication from the valley of the Mississippi with the port of New York.

A prospective view of the commerce, revenue, and other advantages which are certain to result from this extensive chain of internal improvements, was presented in the well known and able report of the Committee of Ways and Means of the Assembly of the State of New York, in March, 1838, (of which Committee Samuel B. Ruggles, Esq., was chairman,) from which report we make the following extracts:—

"The western termination of the Erie canal looks out upon Lake Erie, the most southerly and central of the great chain of navigable lakes, which stretches far into the interior from our western boundary. Around these inland seas, a cluster of five powerful States is rapidly rising. The territory which they comprise, and which is to become tributary to the canal, embraces that great area, extending from the lakes on the north to the Ohio on the south, and from the western confines of this State to the upper Mississippi, and containing 280,000 square miles. To measure its extent by well known objects, it is fifteen times as large as that part of the State of New York, west of the county of Oneida—nearly twice as large as the kingdom of France—and about six times as extensive as the whole of England. It contains 180 millions of acres of arable land, a large portion of which is of surpassing fertility.

"The productive power of this region, and its capability of supplying tonnage for export, are greatly strengthened by the facilities which it enjoys for cheap and easy transportation. In this respect, no country on the face of the globe enjoys greater natural advantages; for it is nearly encircled by navigable waters; and its broad area is intersected in numerous directions by streams furnishing ample means of conveyance, while unusual facilities for the construction of canals, and other artificial channels of communication, are afforded by the level and uniform character of its surface.

"This group of inland States has two outlets for its trade to the ocean; one by the Mississippi to the Gulf of Mexico; the other through Lake Erie and the navigable communications of this State to the Atlantic. Whether it be attributable to similarity of origin, or laws, or habits, or to ties of consanguinity, or superior salubrity of climate, this people evidently prefer the market on the Atlantic, and they are making prodigious efforts to reach it. Three great canals, (one of them longer than the Erie Canal,) embracing in their aggregate length about one thousand miles, are to connect the Ohio with Lake Erie, while another deep and capacious channel, excavated for nearly 30 miles through solid rock, unites Lake Michigan with the navigable waters of the Illinois. In addition to these broad avenues of trade, they are also constructing lines of rail-roads, not less than 1,500 miles in extent, in order to reach with more ease and speed, the lakes, through which they seek a conveyance to the sea-board. The undaunted resolution of this energetic race of men is strikingly evinced by the fact, that the cost of the works which they have thus undertaken, (and most of which are in actual progress) will exceed forty-eight millions of dollars—a sum far exceeding all that New York, with two millions of inhabitants, and two hundred years of accumulated wealth, has ever attempted. The circumstance, moreover, is particularly important, that the public works in each of these wide spread states are arranged on a harmonious plan, each having a main line supported and enriched by lateral and tributary branches, thereby bringing the industry of their whole people into prompt and profitable action, while the systems themselves are again united on a grander scale, in a series of systems, comprising an aggregate length of more than 2,500 miles, with Lake Erie as its common centre.

"It will at once be obvious, that the whole of the tonnage thus to be furnished by these communities, whatever may be its bulk, will pay to our treasury a transit duty for the whole length of the canal; and will therefore yield a revenue twice as large as an equal quantity of products from the districts of our own State, mid-way between the Lakes and the Hudson.

"And what will be the amount of this tonnage, and by what standard shall we measure it?

"If we take the area and the products, and the population of our own State as a guide, we fall far short; and even if we resort to more populous nations—if we select England or France, and compare their productive power with that of this youthful and rapidly increasing race, the parallel will not be complete; for a much smaller proportion of the inhabitants of those kingdoms is devoted to agricultural pursuits; nor is their inland commerce wholly concentrated within any single channel.

"But we, fortunately, possess an adequate and appropriate standard in the Mississippi river, the great rival and competitor of the Erie canal, with which it is destined hereafter to hold divided sway over the vast trade of the west. The number of inhabitants who at present employ that stream and its tributaries, for the purpose of conveyance, is scarcely five millions, and yet the amount which they paid during the last year for transportation on its waters, was between eight and nine millions of dollars.

"The momentous question, whether the tonnage of the inland district under examination is to seek the Atlantic through the Erie Canal, or descend the Mississippi to the Gulf of Mexico, is mainly to depend upon the comparative cost of transportation. But when we consider the circuitous course of the Mississippi, the loss of time in ascending its strong current, and the greater rapidity of communication presented by the Atlantic route; when we advert moreover to the ample volume and trifling lockage of the enlarged canal; and especially when we estimate the commercial effects of the navigable passage opened by the Hudson through the Alleghany ridge; we shall perceive that when the artificial communications thus concentrating upon Lake Erie shall be put in full operation, the cost of transporting agricultural products from the interior of this district will not materially vary, whether carried to the Atlantic or the Gulf of Mexico. The inference, then, may safely be drawn, that whenever a population of five millions around these western waters shall resort to the Erie Canal for the means of conveyance, they will supply it with an amount of tonnage equally great with that now transported on the Mississippi by an equal number of inhabitants.

"It is estimated that the value of agricultural products which annually descend the Mississippi and its tributaries, has already reached $70,000,000. The value of the property transported on the canals of the State of New York, during the year 1836, is shown by official tables to be $67,000,000. Of that amount, it may be estimated that $50,000,000 consisted of property belonging exclusively to a portion of the population of this State not exceeding a million and a half in number, being at the rate of $33 33 for each inhabitant; and that the amount which they paid for its transportation exceeded two millions of dollars. If the same scale of production and consumption shall be assumed for the population of the district in question, (and no reason is perceived why it should not be,) the six millions of inhabitants in the west who will resort to the Erie Canal for the means of conveyance, will furnish tonnage, in exports and imports, of at least $200,000,000 in value. The experience of other nations will show that this amount is not over estimated. The food alone produced in England in the year 1835, by an agricultural population of about eight millions, was valued by their political economists at $604,000,000; while that of France was ascertained by its Minister of Finance to be 5,237,000,000 of francs, or $980,000,000.

"It will be observed, that many of the views which are above taken of the future magnitude of our inland commerce, will be applicable to the two lines of rail-road which are to traverse our territory from the Hudson to Lake Erie. The immense effects which these wonder-working instruments of commerce are to produce in securing the trade of the West to the Atlantic States, and in binding the most distant portions of our country in bonds of beneficial intercourse, would furnish, upon the proper occasion, a subject of interesting and profitable inquiry. Nor need it be apprehended that they will affect injuriously our fiscal interests,—for so far from lessening the commerce of the canals, they will more probably serve to secure and increase it by affording the means of rapid transportation from property and persons, during those winter months in which their navigation is impeded, and thereby preventing the diversion in other channels of those more bulky products which furnish to canals their most lucrative revenues."

NOTICES OF NEW BOOKS.

The Farmer's Library, and Monthly Journal of Agriculture, No. 1. *Edited by John S. Skinner.* GREELY & McELRATH, publishers; Tribune Buildings: New York.

We cordially welcome this beautiful, and every how, to use a technical phrase, well got-up new journal, into the literary arena. We bid it God-speed, in every sense of the expression; because, it is engaged in promoting the welfare of our beloved country, in one of the noblest pursuits of man; because, such a work cannot fail to be eminently useful; and because, its editor is exactly the man to deserve, and we hope to insure success. The first number is rich with valuable information, of a sufficient variety, to give it great interest.

We pretend not to any deep knowledge of agricultural pursuits; but early associations have made us familiar with chemical analysis and synthesis; and, in so far as that is concerned, we can, with a clear conscience, cordially recommend "Petzholdts' Lectures" as very valuable; and, from what we know of the editor of the American Farmer, we feel assured his monthly journal will be replete with the soundest essays on the theory and practice of the noble science of agriculture. Again, therefore, extending to him the right-hand of good fellowship, we can honestly and sincerely say, in conclusion, as we said in our commencement, we cordially wish him God-speed in his laudable enterprise.

KEIGHTLEY'S HISTORIES.—*History of Greece. By Thomas Keightley; History of Rome, (the Republic); History of the Roman Empire; and History of England. All by the same author, with notes and additions, by Joshua Toulmin Smith.* New York: TURNER & HAYDEN, No. 10, John street.

The above histories are well adapted for colleges, schools, or families, and are highly recommended by competent judges as among the best works extant on the subjects of which they treat. They have been introduced, by Professor Sparks, into the Harvard University, as well as in other colleges and seminaries: they likewise enjoy a high reputation in England. The Histories of Greece, the Roman Republic, and Roman Empire, are each in one volume; the History of England, in 2 vols.; the whole series forming a neat historical library of 5 vols. 12mo.

Ocean-work, Ancient and Modern: or, Evenings on Sea and Land. By J. Hall Wright, author of Breakfast Table Scenes. New York: APPLETON & Co., 200 Broadway. Philadelphia: GEO. S. APPLETON, 148 Chesnut street. Cincinnati: H. W. DERBY & Co., 113 Main street. 1845.

This little volume contains, in the familiar style of dialogue, between a father, his son and daughters, a vast fund of geological information. This easy mode of conveying science, or, at all events, of creating a taste for it, is here happily illustrated by these evening conversations. What Peter Parley does for children, the "Ocean Work" will do for young gentlemen and ladies, who will feel wiser, and better, after giving it a careful perusal.

Cobb's New Series of School Books. New York: CALEB BARTLETT.

These works, by Mr. Lyman Cobb, of this city, who has acquired a distinguished reputation as a lexicographer and compiler of books for youth, consist of a First Book, a Spelling Book, four Juvenile Readers, and the new North American Reader. These are to be followed soon by the Expositor, and a School Dictionary.

Mr. Cobb's Spelling Book is considered by teachers, and others, who are acquainted with it, as far superior to any other now in use. It contains nearly all the common, primitive, and also a great portion of the derivative words of the language, about 15,700 in number, while other spelling-books contain from 5,000 to 8,000 only, with from 300 to 1,500 useless repetitions. The classification of words, and the whole arrangement of the book, as we can certify from our own knowledge, is the most useful of any work of the kind known to us.

The reading books contain moral, instructive, descriptive, and historical lessons, adapted to the capacities of every age. The lessons are carefully graduated by the number of syllables, and are also adapted to the capacity of the children who use them.

Mr. Cobb's books are rapidly being introduced into the Common Schools of New York, Pennsylvania, and New Jersey, and appear, gradually, to be superseding other works of the kind.

The Farmers' and Emigrants' Hand-Book; being a full and complete guide for the farmer and the emigrant: comprising the clearing of the forest, and prairie land, gardening, farming generally, farriery, cookery, and the prevention and cure of diseases, with copious hints, receipts, and tables. By Josiah T. Marshall, author of the Emigrants' True Guide. Second edition, revised. New York: D. APPLETON & Co., 200 Broadway. Philadelphia: GEORGE S. APPLETON, 148 Chesnut street. 1845.

This handsomely printed book, of 480 pages, according to the publisher's preface, comprises fifteen hundred different points of information, collected from the best sources. Some of the most valuable, from the transactions of the New York State Agricultural Society, The Prairie Farmer, a valuable work, published at Chicago, &c., &c. We have carefully looked it through, and do not wonder that this should be a second edition; for it certainly contains most valuable information, and no emigrant should go West, with the intention of settling there, without a copy of The Farmers and Emigrants' Hand-Book.

The Revised Statutes of the State of New York, and Additional Laws to 1845, *reduced to Questions and Answers, for the use of Schools and Families. By William Wedgwood,* A. M, *member of the New York Bar—author of Revised Statutes of New Hampshire, Maine, Connecticut, Massachusetts, Vermont, Pennsylvania, New Jersey, Ohio, Delaware, Maryland, Virginia, North Carolina, South Carolina, Alabama, Louisiana, Mississippi, Tennessee, Kentucky, Indiana, Illinois, Michigan, Missouri, Rhode Island, Arkansas, and the Constitution and Statutes of the United States, reduced to a similar form. Twentieth edition.* New York: published by SAXTON & MILES, 205 Broadway. 1845.

We shall let the author speak for himself, giving his reasons why this novel plan of disseminating law is advisable, merely premising that he makes no bad argument.

"Our constitution and laws are the charter of our religious and political liberty. The knowledge of them should be as diffusive as the light. Every man should teach them to his children—speaking of them when he sits in the house, when he walks by the way, when he lies down, and when he rises up. He should write them upon the door-posts of his house, and upon the gates."

If, as Cicero informs us, the Roman children were obliged to learn the twelve tables by heart, as a "*carmen necessarium,*" (an indispensable lesson,) to impress on their minds an early knowledge of the constitution and laws of their country, should we not improve by their example. Thus much for our author. We should have feared his success; but the title-page says this is the twentieth edition!!

A Dictionary of the English Language, containing pronunciation, etymology, and explanation of all words authorised by eminent writers; to which are added, a vocabulary of the roots of English words, and an accented list of Greek, Latin, and Scripture proper names. By Alexander Reid, A. M., *Rector of the Circus-Place Schools, Edinburgh; author of Rudiments of English Composition, &c., with an Introduction, by Henry Reid, Professor of English Literature, in the University of Pennsylvania.* New York: D. APPLETON & Co., 200

Broadway. Philadelphia: Geo. S. Appleton, 148 Chesnut street. Cincinnati: H. W. Derby & Co., 113 Maine street. 1845.

This is a duodecimo edition, which makes it convenient and portable. The primitive word is given; and then follow the immediate derivatives, in alphabetic order. After the primitive word, is inserted the original term whence it is formed, with the name of the language from which it is derived; but what, in our estimation, gives it a decided value over all other small dictionaries we have seen, is the vocabulary of the roots of English words by which it is accompanied, and the accented list, to the number of fifteen thousand, of Greek, Latin, and Scripture names, also annexed. The text is clear, and the paper beautifully white. It is accompanied with strong recommendations from Professor Henry, of the New York University, and other distinguished teachers and professors, in which we cordially unite.

Supplement to Dr. Ure's Great Dictionary.—*Recent Improvements in Arts, Manufactures and Mines, being a supplement to his Dictionary. By Andrew Ure*, M. D., *illustrated with one hundred and ninety engravings.* New York: D. Appleton & Co., 200 Broadway. Philadelphia: George S. Appleton, 148 Chesnut street. Cincinnati: Henry W. Derby & Co., 113 Maine street. For sale by all booksellers and periodical agents. 1845.

The Great Dictionary of Dr. Ure, has so fully, and completely established his reputation, not only for a profound knowledge of the various subjects on which he treats, but for a happy faculty of arranging it, so as to impart it to others, that in noticing this supplement to it, it is a sufficient recommendation to say, that in the Dr.'s preface to it, he says, after stating the motives which have induced him to publish it: "It is under a sense of this responsibility that I have written the leading articles of this supplement, having enjoyed some peculiar advantages in my profession for making the requisite researches and comparisons. I trust that not many of them deserve to be regarded as trite compilations, or as frivolous novelties, with the exception of a few of the notices of recent patents, which I have intentionally exhibited as beacons to deter from treacherous quicksands, not as lights to friendly havens. I have sought, sincerely, to make them all conducive, more or less, to utility; being either new contributions to the old stock of knowledge, or additions and corrections to the miscellaneous volume, of which the present is the sequel." It is only further necessary for us to say, that the supplement preserves the alphabetic arrangement of the dictionary, and treats each article separately—so that it is, in fact, an extension of the Doctor's great work.

Pope's Yearly Journal of Trade, for 1845: *comprising Laws of Customs and Trades, Treaties and Conventions with foreign powers, Tariffs of the United Kingdoms, British possessions abroad, and foreign countries; countervailing and inland duties; duties of lights, buoys, pilotage, &c.; Stamp and Post Office Laws and Rates; Proclamations; Orders in Council, and of government boards; Parliamentary speeches and papers; translations of foreign documents; Dangers of the Seas; Proceedings of Sientific and learned Societies: Geographical Sketches, and recent discoveries; descriptions of articles of merchandise; exchanges, moneys, weights, and measures; miscellaneous information, not to be found in any work besides.* London: James Cochrane, 128 Chancery Lane. New York: for sale, by D. Appleton & Co., 200 Broadway.

With such a table of contents, as is exhibited above, it is scarcely necessary to add, that the merchant, and general trader, can no where look for such a fund of information, bearing upon every subject interesting to them. Pope's Journal of Trade is too well known to need any eulogy from us. Our object, in this notice is, therefore, more to give the contents of it for this year—1845, than to speak of its general value, though that merits more praise than any other manual of the kind. Indeed, as far as regards all commerce which centres in England, it is unique.

The New York Annual Register for 1845. *By Edwin Williams.* Published by Turner & Hayden, No. 10 John street.

This is the tenth year of publication of this statistical work, which contains a vast amount of useful information relating to the State of New York and the United States. It is published at the remarkably low price of seventy-five cents, one half the price of former volumes.

THE

NATIONAL MAGAZINE

AND

Industrial Record.

VOL. I. NEW YORK, SEPTEMBER, 1845. No. IV.

COMMERCE,

FROM ITS FIRST RISE, TO THE PEACE OF RISWICK.

THE great value and importance of Commerce, is so generally felt and admitted, that it would be altogether a work of supererogation in us, at this late day, to endeavour, by any thing we could say, to attempt to enforce it.

Its beneficial effects pervade every civilized community, and give healthful and invigorated action to every branch of national industry. Without commerce, to exchange the varied results of human industry, we should look in vain for the advancement of civilization; since it is only through its means that the surplus produce of a nation possesses any value; and it is equally clear, that unless a surplus is produced, the physical and moral progress of a nation cannot increase. A protected industry and a flourishing commerce, are inseparable; acting in entire harmony, they exhibit a national strength, which nothing can weaken, a substantial prosperity which nothing can diminish. Sustaining as they do, the truest interests of the country, they are the best security for the maintenance of its honor and independence.

We make these few cursory remarks with a view to show, that we are fully alive to the absolute necessity of commerce for the development of the high destiny of nations. We are, therefore, ready to go as far as he that goes farthest, in bearing our feeble testimony to its inestimable value, our belief in the solid foundation upon which that value rests, and our ardent desire, in so far as may belong to this work, to contribute, in every way within our power, to its unlimited success. That we may be fairly understood, it may be proper, *at once*, to state the object we have in view, in commencing this article, and here avow it to be, to declare our interminable dissent to the Free Trade doctrine, that "Commerce, if left alone, will regulate itself." Commerce is a human institution, and, like all other sublunary pursuits, must be subject to human laws. It is a contradiction, in terms, to speak of any institution, that will regulate itself; and, as it appears to us, more so of commerce than of any other. Its very existence pre-supposes the human family as divided into nations, and, as is very well known, these nations have separate and varied customs, manners, laws, and regulations. Inhabiting different climates, and possessing, in infinite variety, the physical gifts of nature, and the power and means of prosperity and happiness, from intellectual endowment and its improvement, nations, like individuals, have separate interests, which they are bound to cultivate, in the manner most to their individual advantage. While we do not deny that a commercial harmony may be brought forth out of these various interests, we most unequivocally declare our conviction, that this can only be the result, not only of laws and regulations, but also of experience, to test their value and fitness: and, if we do not deceive ourselves, we shall show that the history of commerce, from its earliest period, proves incontestibly, that upon no subject has the human mind been more brought into action; none has been the cause of more legislation; and, to the present hour, the necessity of every effort of the highest intelligence is required, to investigate the manifold relations brought about by the commercial interests of a country—more, indeed, than is necessary for any other pursuit in which a community may be engaged.

It is extremely difficult to fix any period for the commencement of commerce. The earliest divisions of mankind into separate communities, no doubt gave rise to an interchange of the few commodities which either had to exchange with the others. Accordingly, we read in Scripture, that Joseph was sold by his brethren to certain merchants, who were trading with their spices from Gilead into Egypt; and this happened about 1700 years before the Christian era. But it was not until many centuries after this, at the time they established their monarchy, that the Egyptians, undoubtedly the first in commerce, as in the arts, commenced trading to the Red Sea and to India.

The commodities which they thus imported, were carried by land to the banks of the Nile, and conveyed down that river to the Mediterranean; but the maxims and manners of the Egyptians were inimical to commerce, and this traffic soon declined.

The Phœnicians, however, were differently situated; their habits were naturally commercial from their position, as the only source of power and opulence. Thus, the foreign commerce carried on from Sidon and Tyre soon grew up to a greater importance than that of any of the ancient States of the world. They not only traded to all the ports in the Mediterranean, but were the first who passed the Straits of Gibraltar and visited the western coasts of Spain and Africa.

They revived an intercourse with Arabia and the continent of India, on the one hand, and with the eastern coast of Africa, on the other. The merchandises purchased in Arabia, Ethiopia, and India, were carried by land to Rhinocolon, were transported thence to Tyre, and distributed all over the ancient world. The monopoly they acquired of the commerce of the Red Sea, about the year 1000, before the Christian era, incited David and Solomon to fit out vessels to trade to Tarshish and Ophir, from whence, we read, they brought gold and rich merchandise to add to the wealth and splendour of these famous kings of Israel.

But the institutions of the Jews, like those of the Egyptians, were not favourable to commerce, which they never carried on to any extent while in Judæa.

The Carthagenians were a trading people, and like the Phœnicians, applied themselves to commerce with great ardour and success; but as the latter had engrossed the trade of India, the voyages of the former were principally to the west and north, extending them beyond the shores of the Mediterranean; some three or four hundred years before our era, they visited the coast of Spain, and by some are supposed to have carried on traffic to Gaul and Britain. They made new discoveries and established intercourse with countries till then unknown, jealously guarding their knowledge from others; but the wars in which they were engaged with the Romans, as is well known, ended in their total overthrow, 146 years before Christ.

The Greeks, although surrounded by the sea, and possessing many large bays and harbours, many of the neighbouring islands, too, being very fertile, were nevertheless a long time before they attained any perfection in the art of navigation. They carried on little, if any, commerce beyond the Mediterranean. Their principal intercourse was with their colonies planted in Sicily. Sometimes they visited Egypt, Gaul, and Thrace, and passed into the Euxine Sea, trading with the countries situate on its borders.

The expeditions of Alexander to the East, enlarged their knowledge of geography. He had observed the rise of Tyre, and he determined to make his projected empire the great seat of commerce, as well as of dominion. With this view, he founded Alexandria, near one of the mouths of the Nile, that it might command the trade of both the East and the West; in this he succeeded to his most sanguine wishes, and Alexandria did command the commerce of the world; notwithstanding the continuance of the Grecian Empire in the East and in Egypt, this magnificent city was only deprived of its monopoly of the trade to India by the discovery of the passage thither, by way of the Cape of Good Hope.

In the early period of the Roman history, commerce was neglected—and not until they acquired a taste for the productions of other countries, was it pushed to any extent. But it then became very considerable, as it is said to have drained the Roman Empire for years, of more than four hundred thousand pounds sterling per annum, in gold and silver, and that one hundred ships sailed annually from the Arabian Gulf to that country.

The reign of Augustus was very favourable to commerce. Under Tiberius, the town of Havern, the most ancient in Friesland, was founded, and under Nero, London is first mentioned as a considerable place. Rome was the centre of the commercial world until about the fourth century, when Constantine, by removing the seat of Empire to Constantinople, made it the seat and emporium of commerce, and it was undoubtedly well adapted to be so constituted.

The invasion of Italy, by the Northern nations in the fifth century, put an end to every species of commerce and broke up all the markets for commodities of every kind. The cities in which alone commerce can centre, became destitute of those immunities which produce either security or enterprise—it became disagreeable and unsafe to visit any foreign country, and thus the knowledge of remote regions was lost—their situation, their commodities, and almost their names were forgotten. The preservation of Constantinople from the general destruction, prevented commerce from ceasing altogether. In that city the knowledge of ancient arts and discoveries was preserved, and a taste for elegance and splendour subsisted; the productions of foreign countries were in request, and commerce, to a certain extent, flourished there, when it was extinct in almost every other part of Europe.

The devastations of the Huns in Italy induced many of the inhabitants of the Adriatic, towards the close of the fifth century, to fly to the sandy isles near the continent, on which isles, seventy in number, they built such habitations as their circumstances would permit, and hence arose the celebrated city of Venice. Necessity obliged them first to devote themselves to commerce—the earliest branch of which was naturally the fisheries. The next commercial object was the manufacture and exportation of salt. Thus, by the application of the inhabitants and its situation for security, Venice gradually became the general magazine for the merchandise for the neighbouring continent; and as the Venetians became in time the carriers of this merchandise to distant countries, they were enabled to bring back raw materials for various manufactures, which greatly enlarged their commerce. In this manner Venice first, and Genoa, Florence, and Pisa afterwards, from inconsiderable places, became populous and wealthy, and laid the foundation for the revival of commerce throughout the Mediterranean; which, in process of time, extended itself without the Straits of Gibraltar. And these free cities of Italy were, for several centuries, the only places in Europe west of the Eastern or Greek Empire, which had any considerable commerce, or any valuable manufactures for the supply of other nations. Their merchants frequented the ports of Aleppo, Tripoli, Alexandria, and other ports of Syria and Egypt; where they procured the produce of India, and visiting the maratime towns of Spain, France, the low countries, and England, by distributing their various commodities over Europe, communicated to the various nations a taste for the valuable productions of the east, as well as some ideas of manufactures, and arts, which were then known only in Italy.

The first mention of the city of Antwerp, afterwards so famous for its trade, is in the year 577, when Theodoric expelled the Danes from it. Some towns, such as Chichester and Abingdon, in England, are said to have been founded about that time. During several centuries, as we have said, commerce was wholly in the hands of the Italian cities. It however began to revive under the government of Charlemagne, and some cities in Germany and Flanders rose up and grew into comparative importance.

The establishment of Christianity in Germany produced very beneficial effects. In the tenth century the Germans had much increased their intercourse with the neighbouring states, and the woollen manufacture springing up in Flanders about this period, Baldwin, third Earl of Flanders, invited into the country all manner of handicraftsmen, to whom he wisely granted great privileges; he also established annual fairs on stated days, at Bruges, Courtroy, Torbout, Mont Cassel, and many other places, where mercantile exchanges could be made; for as there was scarcely any money at that time, trade was carried on in barter.

Venice had, by this time, become a formidable political state, and had acquired many cities and towns on the east coast of the Adriatic, so that the Dodge of Venice assumed the title of Duke of Dalmatia. A regular intercourse had been established with the Saracens of Egypt and Syria, countries famous for producing rice, sugar, dates, cassia, flax, linen, balm, perfumes, galls, wrought silk, soap, &c., besides the rich spices and precious stones of India, brought to these two countries; and with these rich merchandises the Venetians traded all over the western parts of Europe, to their immense profit. They obtained from the Greek Emperor a freedom from all customs and taxes in the Empire, and in the year 996 the Emperor, Otho III., likewise granted them various privileges, with a right to establish fairs in several parts of Germany, where they carried on a vast commerce.

The Crusades, or Holy Wars, contributed much to the extension of commerce, during the eleventh and twelfth centuries. The Genoese, the Pisans, and the Venetians, furnished the vessels necessary to transport the vast armies that embarked on these wild enterprises, and, also, with provisions and military stores. Besides, the immense sums they received on that account, they obtained commercial privileges and establishments in the settlements which the Crusaders made in Palestine and other provinces of Asia. From these sources, they acquired great wealth and a proportionate increase of power. From the intercourse with the refinements of Asia, the Europeans began to be sensible of wants with which they were formerly unacquainted; and such a taste grew up for the commodities and arts, that they, not only encouraged the resort of foreigners to their harbours, but began to feel the necessity of resorting to commerce themselves.

The great success of Lubec, about this time, soon caused other towns to be founded in the Baltic, which, suffering much from the attacks of neighbouring depredators and pirates, were induced to enter into an association for their mutual safety and the protection of their navigation. Thus was gradually formed the famous Hanseatic Confederacy, which made so great a figure in several succeeding centuries. "Werdenhagen" fixes on 1169, for the first confederacy, which consisted of the twelve following towns: Lubec, Wismar, Rostock, Stralsund, Gypeswald, Anclam, Stetin, Coburg, Stolpe, Dantzig, Elbing, and Koningsburg—though probably not all of them at the first, as some of them do not appear to have been founded till a later period. Lambecius, librarian to the Emperor Leopold, says, "That the league of the Hanse Towns did not commence till after the league between Lubec and Hamburg, in 1241, at which time these towns had all the trade of the south shores of the Baltic, from Denmark to the bottom of the Gulf of Finland, besides an extensive traffic with other parts."

In the beginning of the thirteenth century, all the foreign commerce of England was engrossed by the German merchants, known as the Merchants of the Steel-yard, London. About 1250, a society of English merchants was formed, who had privileges granted to them in the Netherlands, by John, Duke of Brabant, whither they carried English wool, lead, and tin; taking in return, woollen cloths, linen, and other articles. From this society, the company, styled Merchants of the Staple of England, took its rise.

France, at this period, possessed very little foreign commerce; but, in the cities of Italy, it had increased greatly. The republic of Genoa was in its glory, eclipsing even Venice.

A new era now commenced in commerce by the discovery of the mariner's compass; but it was at least half a century before it emboldened navigators to tempt untried seas. One of the first fruits of its introduction was the discovery of the Canary Islands, by the Spaniards.

Many of the European princes were now becoming alive to a commercial spirit, and Edward I. permitted all nations to traffic with England in her maritime ports, *by wholesale only;* and they were allowed to take any goods away upon paying the export duty, except wine, which required a special license. The following were the imports and exports in the 28th year of the reign of Edward III.:

Exports.

31,651½ sacks of wool, at six pound per sack; and 3,056 cwt. felts, each hundred weight being six score, at 40s. per cwt., with the customs, &c., thereon, amounted to	£277,606	2	9
Leather, with its customs	96	2	6
4,774½ coarse cloths, at 40s. each; and 8,061½ pieces of worsted, at 16s. 8d. per piece	166,266	18	4
Customs thereon	215	13	7
Total exports, with the duties thereon	£294,184	17	2

Imports.

1,831 fine cloths, at £6 per cloth, which, with the customs, comes to	£11,083	12	0
397¾ cwt. of wax, at 40s. per cwt., which, with the customs, comes to	815	7	5
1,829½ tuns of wine, at 40s. per tun, which, with the customs, comes to	3,841	19	0
Linen cloth, mercery, grocery, and all other wares whatever	22,943	6	10
On which the custom was	285	18	3
Total imports, with the duties thereon	£38,970	3	6

Sir Wm. Temple observes upon this: "That when England had but a very small commerce, she was rich, in proportion, to her neighbours, by selling so much more than she bought." At this period, observes the historian, "The materials of commerce were now increasing by the improvement of manufactures in various parts of Europe; while the discoveries of the Portuguese on the coast of Africa, excited a more enterprizing spirit, and led, in 1487, to the discovery of the Cape of Good Hope, which they passed about ten years afterwards, and thus accomplished the first maritime voyage to India."

This discovery made a great sensation throughout the commercial world, and was soon followed by another, destined to be of equal, if not of much greater influence, though, at that time, it does not appear to have produced so great an immediate effect. The reader will have anticipated, that we allude to the discovery of America, by Columbus, in 1492. One very great reason for the different effect produced, doubtless was, that India was an old country, and the wealth which had resulted to Europe, from its previous commerce with that country, had given rise to the belief in its immense riches, in its gold, precious stones, spices, &c.; while nothing was known of America for a considerable time; for it was not till the year 1530, that the Spaniards landed in Peru, nor did the English attempt any settlement in North America till 1607, when a colony was commenced in Virginia, although an Englishman (Cabot) had discovered Newfoundland as early as 1497. About this period, the Portuguese were undoubtedly the foremost commercial nation; for we find them pushing their conquests in the East Indies. Although Brazil had been discovered by Alvarez de Cabral, in 1550, who was, it is said, driven on its coast by a tempest, yet the new discoveries in Asia were then the great object of pursuit: a voyage to India was the high road to fortune and preferment.

"The splendid wealth," says the Abbe Raynal, "which the Portuguese brought from India, gave their nation such a superiority in all parts of the world, as every individual wished to partake of. No person, indeed, went over voluntarily to America, but those unfortunate men whom the Inquisition had doomed to destruction, who were added to the convicts already sent there. It was not, therefore, until 1549, that Thomas de Sousa was sent to Brazil, as Governor, to regulate and superintend it."

The sixteenth century was, nevertheless, destined to make a great change in the commercial relations of the world; for in attempting the discovery of a north-west passage, the English navigators had become acquainted with the whole coast of North America, and it was not long before they established the Greenland and Newfoundland fisheries. The privileges of the Merchants of the Steel-yard, in London, were abolished. A passage was, at this time, discovered to Russia round the north cape of Lapland, which opened a new field for commerce; and a Russian trading company was immediately formed in London. A company was also incorporated there, to trade with Turkey, and an intercourse with Guinea, on the coast of Africa, gave rise to another trading company. All these companies were created by royal charter, which prescribed rules for their management.

The seventeenth century was, however, the period in which the principles were adopted which commenced to lay the foundation of the commerce of Europe, and to advance it to its present height. The interest of nations, and the value of commerce, became better understood; navigation was improved, new settlements were made, and those which had previously been made were rising into importance. Still, the lucrative commerce of the East was the great object. The English East India Company was formed in 1600, and the United Dutch in 1602. The French visited the East Indies in 1601; but no French company was formed till 1644. The Danes established one in 1617, and the Swedes in 1627. The following account, published by Mr. Munn, of the quantity of Indian merchandize consumed in Europe, gives a very good idea of the proportion of the different articles of this commerce. The prices fixed are the prime cost in India, including all charges on board ship:

			s.	d.	
6,000,000	lbs.	of Pepper, at	0	2½	per lb.
450,000	"	of Cloves, at	0	9	"
150,000	"	of Mace, at	0	8	"
400,000	"	of Nutmegs, at	0	4	"
350,000	"	of Indigo, at	1	2	"
1,000,000	"	of raw Silk, at	8	0	"

This statement, probably, includes only the principal articles. At least, it is certain that, about 1631, several other kinds of merchandise were usually imported, as taffetas, printed calicoes, and China ware. Tea, if brought at all, was in such small quantities, that, in 1660, it was not of sufficient consequence to be subject to duty. Dr. Davenant, who wrote in 1688, was of opinion that English commerce, from 1656 to 1688, had gone on gradually increasing; and that up to the last year, they had gained, by their foreign trade and home manufactures, at least two millions per annum; and he thus apportions the profits:

The plantation trade may bring in	£600,000
East India trade	500,000
The European, African, and Levant trade, by our own product, may bring in	600,000
Ditto by re-exports of plantation goods	120,000
Ditto by re-exports of East India goods	180,000
	£2,000,000

The account is, probably, somewhat beyond the truth, with respect to the period to which it refers; but that there had been a considerable influx of wealth was obvious, from the rental, which had nearly trebled, and the price of land had doubled; the stock of the land was multiplied above five fold, and the money in circulation above four fold. This increase gave rise to Banks, for the facilities of commerce in England. Venice and Genoa had long previously had them, and they were now adopted in other states. The Banks of Hamburg, Amsterdam, and Rotterdam, were now established. Thus, with its principles generally understood; with most of the establishments formed which are necessary to facilitate its operations; *with laws and treaties in force* for its protection and encouragement; markets established for the purchase or sale of commodities in almost every part of the globe; navigation brought to a high degree of perfection; *vast improvements in arts and manufactures;* and a great increase of artificial wants, from the progress of luxury and refinement, the commerce of the world, and particularly of Europe, had, during the seventeenth century, expanded in an astonishing degree, and become intimately connected with the political existence of almost every state.

We have pursued this very brief account of the rise and progress of commerce, taken from many sources, with a view to bring down its history rapidly to a period when we can take a view of it on which we can thoroughly rely; and shall now proceed to examine somewhat particularly into the statistics of British commerce; in which it is our purpose to show, that so far from having been let alone, it has been watched with the most vigilant eye, and, from the earliest period, has been fostered and protected. Nay, we go further—we shall insist, that it has by these means, and these only, been built up to its present magnificence.

We have now before us, Anderson's History of Commerce, and under the title England, we find she made ninety-one commercial treaties with twenty-six European Governments, between the years 1217 and 1766. These treaties were purely commercial, and are over and above many others, by no means so numerous, that were political treaties. They were as follows:

1217—with Norway.
1224—with France.
1269—with France.
1274—with Flanders.
1308—with Portugal.
1317—with Brabant and Bretagne.
1325—with Venice.
1325—with Spain.
1325—with Holland.
1338—with Flanders.
1340—with France.
1347—with Genoa.
1351—with Genoa.
1352—with Pisa.
1352—with Portugal.
1388—with Prussia and Flanders.
1401—with Friesland.
1403—with Spain.
1407—with Castile and Portugal.
1407—with Prussia and the Hanse Towns.
1408—with Venice.
1409—with Prussia.
1410—with Castile.
1411—with Flanders.
1414—with Genoa.
1417—with the Hanse Towns.
1417—with the Netherlands.
1418—with Arragon and Barcelona.

1419—with Flanders.
1421—with Genoa.
1437—with the Hanse Towns.
1438—with Flanders.
1439—with Portugal.
1440—with the Netherlands.
1444—renews commercial correspondence with Holland.
1446—with Flanders.
1450—with Denmark.
1456—with Hanse Towns.
1458—with the Netherlands.
1460—with Genoa.
1462—with Genoa.
1465—with Denmark.
1468—with Bretagne, against France.
1469—new commercial truce with Hanse Towns.
1472—with Hanse Towns.
1474—with Hanse Towns.
1478—with Ostergrow and Westeurow.
1478—with Netherlands.
1482—with the Guipuscoans.
1482—with the Schelling Isles.
1483—renews commercial intercourse with Spain.
1484—renews commercial intercourse with Portugal.
1486—with France and Scotland.
1489—with Denmark.
1490—ample commercial treaty with Denmark.
1490—ample Commercial Treaty with Florence.
1493—suspends her commerce with the Netherlands.
1496—with Netherlands.
1497—supplemental Treaty with Netherlands.
1498—with France and Riga.
1499—with the Netherlands.
1500—with Spain.
1510—with France.
1511—with Spain.
1514—with France.
1515—with Spain.
1516—with the Netherlands.
1519—with Genoa.
1520—with Genoa, called Intercourza Magna.
1550—with France.
1604—with Spain.
1606—with France.
1610—with France.
1621—with Denmark.
1623—with Russia.
1630—with Spain.
1630—with Denmark.
1642—with Portugal.
1654—with Portugal.
1654—with Denmark.
1654—with Sweden.
1655—with France.
1656—with Sweden.
1659—commercial benefits obtained by Rump Parliament.
1661—with Sweden and Denmark.
1703—METHUEN with Portugal.
1715—with Spain.
1719—with Hamburg.
1758—treaty of peace and commerce with Spain.
1735—with Russia.
1766—with Russia.

In this cursory sketch of the history of commerce, we see that in particular periods of the world, particular nations had what may be called the Commercial Supremacy—Egypt, the Phœnicians, the Carthagenians, the Greeks, the Romans, the Venetians, and the Genoese, each in their turn; but this was a commerce nearly all within the Mediterranean Sea; and we propose to call it Ancient Commerce. With a view, however, to show more clearly the rise and progress of the present commercial nations, which, after all, is the matter in hand, we think it best to commence, what we propose to call *Modern Commerce*, with the accomplishment of the passage to India by way of the Cape of Good Hope, and the discovery of America by Columbus; presuming no one will doubt that these two events, happening within a few years of each other, changed the whole face of the Commercial World.

We have seen that at the period named, Portugal led the way in the East, and Spain in the West. The immense treasures of Asia, at one time, appeared to be within the grasp of the former, whilst those of the West were, apparently, in a fair way to become the property of the latter. The northern sections of Europe claimed to have a share of the two New Worlds, for so, as far as regards commerce, they certainly were. The northern European nations claimed their share in the great prizes for which the commercial world was contending; and, accordingly, Holland, then one of the chief commercial powers, also, Denmark and Sweden, started in the race with Spain and Portugal, and made settlements in both America and India. If we were entirely ignorant of history, we should, judging from the present power of Great Britain and her great navy and commercial marine, naturally suppose, that she was one of the first to embark in all these enterprises; but the truth is wholly different; for the first voyage undertaken beyond the Cape of Good Hope by England, was not till the year 1591, nor was any attempt made at a settlement in America till 1607, when Virginia was first settled.

The first indications of increase, on the part of the English, in the foreign trade, incident to the discovery of the passage to India, took place in 1527, when, according to Lord Herbert, "Two fair ships were sent out by the King (Henry VIII.) to the new regions, then daily found out by the Portuguese and Spaniards."

Little, however, was done, if, indeed, any thing was accomplished, in this reign. England remained entirely inactive, having nothing to do with either India or America, except the cod fishery on the Banks of Newfoundland. As early as 1517, there are said to have been as many as fifty Spanish, French, and Portuguese ships engaged in fishing; but the first attempt of England, to participate in it, was not until 1536.

It does not appear that a direct trade was opened to India from England until 1591, when a number of merchants, being an incorporated company for trading to Turkey, sent three ships from Plymouth for the Cape of Good Hope, one of which, after many disasters, reached India, and took in a cargo of spices at Sumatra and Ceylon Three others were sent out in 1596. The Dutch commenced their trade in 1595, to a greater extent, and carried it on with much more success than the English. This stimulated the English, and, on the last day of December, in the year 1600, a charter was granted to the East India Company, which commenced with a capital of £30,000 sterling, subscribed, with great exertion, by the Lord Mayor, Aldermen, and about one hundred of the principal merchants of London. From this obscure, and comparatively insignificant origin, arose the anomaly of a commercial company, now possessing an unlimited power over the destiny of millions of human beings, whose political fate is settled and determined by a President and Board of Directors, in Leadenhall-street, London!! This is neither the time nor the place to enlarge upon this mighty and immense power, obtained and preserved through the medium and for the purposes of commerce; else, might it be shown, how closely connected is mercantile supremacy and political power. We may take occasion, at some future time, to say something in that very important connexion. At present, we must go on with our History of Commerce, being anxious to reach the point to which we wish to come, namely, the rise and progress of commerce in America. But, first, let us proceed to show, how England, who undoubtedly up to the reign of Elizabeth, was very far behind in the commercial world, has taken the immense leap, which has made her, at this moment, what she is, and what we need not take many words to describe; since her supremacy in wealth and influence, in the affairs of mankind, cannot admit of a doubt. The few remarks called forth by the establishment of the East India Company, took us from our direct narrative in the year 1600. As this year commenced the seventeenth century, we shall take that as a starting point, and shall attempt, as rapidly as possible, to show what has been the gradations of her rise, and endeavour to trace the causes which have led to it. To go through a history of the laws which have been enacted, the treaties which have been made, the wars that have been declared, the battles that have been fought, the blood that has been shed, and, above all, the human labour that has been expended, for no other purpose than to make all nations of the earth tributary to England's greatness, would require, not only volumes, but a whole library of books; and, moreover, it would involve a knowledge of every science, for it would necessarily comprehend them all; and it will, therefore, astonish some persons not a little, that we should undertake to prove, that all this has been produced by the measure, which no less a personage than the Duke of Wellington recently avowed to be the present policy of Great Britain, namely: "That when free trade was talked of as existing in England, it was an absurdity." "We proceed," says he, "on the system of protecting our own manufactures and our own produce—the produce of our labour and of our soil; of protecting them for exportation, and protecting them for home consumption; and on that universal system, it is absurd to talk of free trade."

We have shown that, up to the year 1667, she had, to promote her interests, made ninety-one commercial treaties, in all which the one grand object was, to advance British commerce and British manufactures. We wish our space would permit us to set this forth at large; but this is impossible, from the nature of our work. A few examples must suffice.

In 1613, an English company, chartered by the King, undertook to monopolize the Greenland fishery; and with seven armed ships drove away four private English ships, and fifteen sail of Dutch, French, and Biscayens, and forced some other French ships, which they permitted to remain, to pay them tribute.

The imports in England, in 1614, were.............	£2,141,283 17 10
Exports at same time..............................	2,090,640 11 8

One Lewis Roberts, in the Merchants' Map of Commerce, published in London in 1638, states, "That the late great traffic of this island hath been such, that it has not only proved a bountiful mother to the inhabitants, but also a courteous nurse to the adjoining neighbours; so that whatever trade they had lost, we had gained; and they now obtained a large portion of what they consumed, of distant parts, through the medium of England. "Thus England," he proceeds, "had fallen into the traffic with India, Arabia, and Persia, which was formely enjoyed by Venice, and now furnished that very city, plenteously with the rich commodities of these eastern countries. London also supplied the place of Venice to these eastern cities."

In 1646, a law was passed that no trade should be carried on with the British colonies in America, except in British bottoms. In 1651, the famous act was passed, by the Rump Parliament, by which it was enacted, "That no goods of the growth, produce, or manufacture, either of Asia, Africa, or America, should be imported into any of the possessions of Great Britain, except in British ships, navigated by English commanders, and having at least three-fourths of the sailors Englishmen, except such as should be imported directly from the place of its manufacture." It was also further enacted, "That no goods of the growth, produce, or manufacture of Europe should be imported into Great Britain, except in British ships, or such ships as were the real property of the people of the real country, or place in which the goods were produced, or from which they could only be, or most usually were, exported." This is the famous navigation act of Great Britain, which, of course, built up her commerce, to the exclusion of that of other nations. This law was re-enacted after the Restoration, and is now in full force, being a fundamental and permanent law of the British Empire.

In the year ending Michalmas, 1663, the imports amounted to £4,016,019, the exports to £2,022,812, and in 1669, the imports were £4,196,139, the exports £2,063,774.

The Navigation Act had so increased the tonnage that in 1688 it was nearly double what it had been in 1666. In 1609, it was estimated that the whole value of property, except real estate, was £17,000,000—that in thirty years it was nearly doubled. In 1662, an act was passed that no sort of wines, other than Rhenish, no sort of spicery, grocery, tobacco, potashes, pitch, tar, salt, resin, deal boards, fir, timber, or olive oil, should be imported from the Netherlands or Germany, upon any pretence whatsoever, upon penalty of the loss of all the goods, as, also, of the ships and furniture. In 1678, there was an entire prohibition of trade with France. The Act of Parliament declared, "That it had been by long experience found that the importing of French wines, brandy, linen, silk, paper, and other commodities of the growth, produce, or manufacture of the territories of the French King, had much exhausted the treasure of the English nation, lessened the value of the native commodities and manufactures thereof, and caused great detriment to the kingdom in general, it therefore, proceeded to enact that for three years from the 20th March, 1667, (new style 1668,) and to the end of the next session of Parliament, no French wine, vinegar, brandy, linen, cloth, silk, salt, grapes, or other product or manufactures of the King of France, should be imported in any sort of vessel whatever, into any part of England, and that the importation or vending of any such goods should be adjudged to be a common nuisance to this kingdom in general, and to all his Majesty's subjects thereof."

In writing of this Act, Anderson says, "The immense importations into England, of French wares of various kinds, gave just umbrage to all wise people, as occasioning a vast annual loss in point of the general balance of England's trade, some say to at least one million sterling, others to considerably more; because, while we were wantonly and without measure importing and using the produce and manufactures of France, the wiser French ministry were, from time to time, laying heavier duties upon the English manufactures and produce. Hereby the English foreign trade in general languished, rents fell, and all ranks began sensibly to feel its bad effects. Yet they at first imputed this misfortune to a wrong cause, which made the merchants and traders petition the Parliament against the East India and Levant Companies. In conclusion, they discovered the true cause; whereupon they made such earnest application to the Parliament, as influenced the House of Commons to come to a vote that the trade with France was detrimental to the Kingdom. It was, indeed, time for the English to interpose and save the almost expiring liberties of Europe. The authors of this time say, that until after this prohibition the annual exports of England on an average did not exceed three millions sterling; but that, in about twenty years after, the exports had gradually increased to near seven millions yearly, which vast augmentation was principally occasioned by *the great increase and exportation of our own woollens, silk, linen, iron, and other manufactures since the prohibition of commerce with France, and partly, also, to the prohibition some years after, enacted of the wear in England of East India manufactures: and, likewise, in part of the enlarged demand for our American colonies of all sorts of manufactures and necessaries.*"

As Charles II. never again assembled Parliament after the 20th of March, 1681, the act prohibiting the importation of French merchandise remained in force till it was repealed in the beginning of the next reign, by an act, 1st of James II.; "whereupon," says Anderson, "ensued an inundation of French commodities to the value of about four millions sterling, within the compass of less than three years time, whereby all the evils formerly complained of were renewed, so that the nation would have been soon beggared, had it not been for the happy revolution in 1688, when all commerce with France was effectually stopped."

In 1685, came the revocation of the Edict of Nantz, by Louis XIV. The repeal of this law, made by Henry IV., in 1598, for the protection of his Protestant subjects, produced the most extraordinary effects; and, so far as other parts of Europe were concerned, we may truly say, effects the most happy, for it caused the flight from France of hundreds of thousands of Protestant artisans of every description. The number of fugitives from the cruelties inflicted upon the Protestants, at and about this time, have been variously estimated at from three to five hundred thousand, and by some as high as eight hundred thousand, or a million. Large numbers of them settled in Prussia, and Frederick II., in his Memoirs of the House of Brandenburg, says "They brought all sorts of manufactures, which the country before needed, establishing under the *protection* of the Elector, Frederick William, the manufacture of cloth, serges, stuffs, crapes, caps, stockings, hats, and also the dying of all sorts of colours." "Berlin," it is added, "now had goldsmiths, jewellers, watch-makers, and carvers; and such as settled in the open country, planted tobacco, and a variety of fruits and pulse." But those of a superior class, or who had more money, generally took refuge in England and Holland. Voltaire, who makes the entire number who left France, in three years, about five hundred thousand, says, "An entire suburb of London* was peopled with French manufacturers of silk—others brought there the art of making chrystal in perfection, which has been, since this epoch, lost in France." Anderson thinks more would have settled in England, but "through the too general and impolitic aversion of the English to all strangers, even though suffering for the Protestant religion, and, also, because of the great privileges and great immunities allowed them in Holland, Switzerland, Germany, and Prussia. From these causes, (he continues,) we are not to wonder that not above fifty thousand of them did actually settle in England, where, instead of doing us hurt, they have proved a great and manifest blessing, by improving some of our ancient arts and manufactures, and likewise, by introducing various new ones, as many of these refugees were eminent merchants, and brought with them much money and effects. I have seen a computation, on the lowest supposition, of only fifty thousand, who were estimated each man to have brought sixty pounds in money; so that they added three millions sterling to the wealth of Great Britain." To these refugees, it is admitted by all English writers, was their country greatly indebted for vast improvements in the woollen manufacture. Sir Joshua Childs, in particular, who wrote in 1688, ascribes the most happy influences to this increase of wealth, and the reduction of the rate of interest to six per cent. per annum. He says, "Five hundred pounds with a daughter, sixty years before, was esteemed a larger portion than two thousand pounds *now*."

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* Spitalfields.

It will be recollected that the Revolution in England of 1688, brought on, what was called the seven years war, which strengthened her manufactures. The peace of Riswick took place in 1697. Dr. Davenant says, in regard to the state of the country at this time, after a considerable detail about the shipping, the navy, and a variety of the common topics of discussion, "But the truest sign of our vitals not being tainted and that we are not wounded in any noble part, is, that our home produce, generally speaking, holds up to the former rates, for this is a direct evidence that we are not at all, or very little, diminished in the numbers of our people, and it is a mark that though we may have been interrupted in our importations, yet that we *export* rather more than in former times." "The war," he farther says, "had not been unproductive of some advantages to our domestic industry which helped us to sustain the heavy pressure it had laid upon us. The exportations of provisions and manufactures, occasioned by the wants which war had brought upon our neighbours, has stood in the room of money, which else must have been exported." But we are exceeding our limits, and must draw this subject to a conclusion for the present. Having given some examples of the policy pursued by England, in the seventeenth century, to build up her manufactures and commerce—and proven, we think, incontestibly, what we promised to prove in the commencement of this imperfect sketch of the history of commerce, namely, that, it never *has* and never *will regulate itself.* That nations—have separate interests—and that a wise and prudent government should deliberate upon these interests and legislate accordingly, would seem to be too self-evident to need enforcement—and yet, many of the political economists of England, a country wholly indebted to the care and *protection* of its best interests, *its internal industry* for its prosperity—would, if they *could*, persuade all other countries, to eschew this system; and suffer their industry to take care of itself—which really means no more nor less, than to ask all other nations to become colonies of Great Britain, and neglect their own dearest interests.

We shall conclude this article by a remark, which will most probably have occurred to our readers, that the commerce of most of the ancient nations was principally one of fruits, salt, skins, rice, sugar, cassia, balm, perfume, spices, the precious metals, and precious stones. There were, it is true, in the later periods, some manufactures, particularly those of wool and flax.

But, compared with the commerce of the present day, it was comparatively very small, as is fully and satisfactorily proven by the tables of exports and imports, which have been preserved, and to which we have heretofore adverted. Indeed, in 1613, the exports from England to all parts of the world, according to a return made by an order of the Privy Council, amounted to only £2,090,640, and the imports £2,141,283; and this, be it remembered, was six years after she had founded a colony in Virginia.

Having occupied as much space as we think it proper to devote to any one article, we shall conclude for the present, intending to resume this history in our next. We cannot do this, however, without calling the attention of our readers to the fact, that of all the nations concerned in commerce during the period we have been reviewing, but few remain; and this leads us to the inquiry of where they are now? Where is imperial Rome? Where Venice? Pisa? Genoa? Where are Lubec, Rostock, Wismar, and the other Hanse Towns?—once the mistresses of the seas! Where are Spain and Portugal?—the discoverers of the passage to India by the Cape of Good Hope, and the first settlers of the New World!

These questions answer themselves. Their prosperity and glory have departed, because they had no stable foundation in their domestic industry, but were the mere distributers of the treasures of others! In our next number, we shall inquire into the advancement of commerce in the eighteenth and nineteenth centuries.

MINING DISTRICT OF BRAZIL.

The following familiar account of a visit to the mining district of Brazil, was written by an intelligent and intimate friend of the Editor, who passed a short time in that almost unknown region a few years since.

It will be obvious from the style that this narrative is without pretention to any thing more than a cursory description of what presented itself to the author in travelling for his amusement.

We think, however, it possesses a considerable interest, as it introduces us to entire new scenes, in a country very little known.

It was at first our intention to condense the narrative, and reduce it more into form. Upon a re-perusal of the manuscript, however, we have concluded to publish it as originally written, satisfied that our readers will perceive it to be the production of a gentleman of education and intelligence.

I left Rio in company with two gentlemen, on the 28th November, for the mining districts, and on the fifth day crossed the Mar d'Hespanha river, that divides the provinces of Minas Geraes and Rio de Janeiro, having traversed a well wooded and tolerably cultivated country. Even at this short distance from the capital the roads were in the most frightful condition. The one we were pursuing was comparatively new; for days we journeyed without meeting with a single traveller, and the only enlivening points were an occasional encounter with troopers carrying salt into the interior, or large droves of oxen coming down for the city consumption. On arriving at the Mar d'Hespanha, we were ferried over the river, which is here 200 yards in breadth, and formed by the junction of the Parahiba and Paraibuna rivers, whose streams meet here and create a current of six or eight miles an hour. After exhibiting our passports to the Commandant, we were granted one of the rooms belonging to the barracks, and although the place afforded miserable accommodations we were sufficiently contented, as we had, on setting out, determined to rough it. Early next day we struck into the forest. To those unacquainted with the grandeur of a South American forest no words can depict the sensations with which a stranger traverses it for the first time; even at noon day there is the stillness and gloom of twilight, and the silence is alone broken by the harsh screaming of flocks of parrots, or the more melancholy note of the arapongo. In the evening we arrived at a farm, belonging to a Captain Joaquim, where we requested accommodation, and which, according to the custom of the country, was courteously and hospitably afforded us. We here saw a striking example of what industry and patience in a rich and fruitful country like Brazil can effect. Our host, about fifty years ago, having scraped a little money together, retired to this uninhabited spot, and for a trifling sum purchased several square leagues of land, on which he built a house and began clearing the land for cultivation. As his family grew up and married, he gave them portions of his estate, and their labours assisted its general improvement. At the time we saw him he was the proprietor of a thriving territory, and his family growing up in wealth and peace around him. We took our leave on the morrow, of this worthy patriarch, with deep regret, feeling that, perhaps, in this world we should never again meet so many happy faces.

On our onward route we encountered, the next three days, little of interest. We met large parties of blacks clearing the lands by burning the woods—this, independent of being the only mode in use, has a twofold advantage, the ashes of the timber making an excellent manure and the heat killing the ants and other vermin destructive to agriculture. When these grounds are cleared, they are planted with Indian corn, mandioca, and coffee. We arrived on the 29th at the small village of Conceicao de Rio Novo, and were hospitably received by a Senor Leite, to whom we had a letter of recommendation. Our worthy host laid an almost forcible embargo upon us, and by a thousand delicate attentions endeavoured to amuse us. The next day we had famous sport on the river with our fowling pieces, but the presence of numerous alligators basking in its rapid stream, and the unsteady motion of our little canoe, made our enjoyment somewhat perilous. We left our worthy entertainer on the 1st December, highly gratified by our reception, and until we arrived at Barbacena experienced always the same hospitable treatment, staying one night at the estate of Francisco Banosos, and another at that of Captain Senor d'Alorn. I mention these trivial circumstances at the risk of being thought tedious, to show the kindly and hospitable character of these people towards strangers. I particularly name these worthy men, in the hope, that some future traveller meeting them may assure them that their kindness will long be gratefully remembered. On approaching Barbacena, the country became more barren, and before arriving at that little town we crossed a Serra, and found a material variation in the climate. Our road now lay over patches of rich black loam and tracts of ground highly ferruginous. The matrix of the Serra was of red sandstone, and a large wash of quartz pebbles at right angles with the vein. We were much struck with the exposed appearance of the town. It is situated in the centre of a large plain; the principal streets are wide and clean, and have some good houses in them. This is quite a central point, from whence various roads branch off, one leading to St. John del Rey and Sabara, and the other to Villa Ricca and the diamond districts. Until the mining companies were formed, few foreigners had passed through Barbacena, and Shawe mentions, "That in 1809, passing here, he was quite an object of curiosity." Indeed, I can very easily credit it from the sensation our appearance created. We had tolerably good accommodations at a venda, kept by Senor Florentino, and felt the cold quite bracing. On leaving Barbacena, we found ourselves on the Campos or large interminable plains, covered with long grass, but which, from its continued exposure to the sun, is not sufficiently esculent to afford nutriment to cattle. These plains are intersected with streams of delicious water, and along their margins wild clumps of trees are richly spread.

On the following evening we arrived at the interesting and prettily situated village of Quelur. I have seldom, I think, experienced more pleasing sensations than when I entered this quiet retired spot. The sun had just set, and its golden rays still lingered on tree and tower; "twilight's soft dews were stealing o'er the village green," the church bell was tolling for Ave Marias. I felt that I was forcibly reminded of some sweet village at home, there was such a repose about the scene, and my heart warmed in recollections of my dear distant native land. From Quelur we proceeded the next day to Capao d'Hollanda, ascending the steep and rugged serra of Onro Branco. The apex of the serra formed the centre of a circle many leagues in extent—the view was very fine. Hill and dale—"Alps, as it were, on Alps"—now vast extents of plain covered with eternal verdure—then wild and trackless forests, while below, rolled a broad and rapid stream losing itself in the distance. Capao d'Hollanda is a pozo, or travellers rest, kept by the Administrator of the topaz mines, situated within a mile of this place. Our host, was very civil, and regaled us with the luxuries of bread, beef, and wine. We were annoyed with a frog concert in the evening, surpassing their northern brethren in extent of voice. I had till then no idea that such little wretches could keep up such a loud and almost everlasting din. Next day we visited the topaz mines, and were much struck with the dissimilarity of their appearance to the idea we had formed of them. They were a little removed from the road, and apparently did not differ in appearance from several gold lavras or washings we had passed. The topaz is found in nests of transition clay, and in vast quantities, but ordinarily, of poor quality. They are generally found of one pyramid each, and those of double pyramids are rarely met with. They are procured by loosening the clay with a small pick, and washed by turning a stream of water over it. The topazes are then taken from the gravelly bed of stones after the water is let off. I found several, as well as some fine crystals, which the inspector insisted on my keeping. Dr. Speir says, "The basis of the rock is flexible quartz, yet it is seldom in its usual form, but more frequently in the variety called iron mica slate. Incumbent upon it, are immense layers of a modified mica, which might be denominated earthy talc. The brown ferruginous porcelain earth, here called 'marsa branca,' is the surest indication of topazes which lie loose and scattered in it, as well as, though more rarely, among the broken and decomposed quartz. With the topazes occur euklases and quartoze rock crystals of various sizes. Topazes are often found in the fine softened mica, of a yellow and pinchbeck brown earth, which one is tempted to call earthy talc."

From Capao d'Hollanda to Villa Rica, is sixteen miles. Villa Rica, called, also, the Imperial City of "Ouro Preto," is the capital of the mining district, and once boasted of a population of 40,000 inhabitants. It is bounded by the Serra Fria on one side, and by the river Doce on the north, and is badly situated as respects local appearance. The streets are mostly on declivities, which intersect each other, and the houses are built from the tops to the bottoms of the hills. The ground about is argillaceous and seems suitable for the purposes of agriculture. The population is now reduced to 10,000, as the habits of the people who pursue gold washing are extremely migratory; they move about, as the prospect of gain impels them, preferring its uncertain and possible speedy riches, to the slower returns of agricultural labour. The churches, about fourteen in number, are very rich; but the houses are, mostly, shabbily built and there is altogether an air of solitude and desertion about the town. We were taken by a Senor Coutto, to whom we had letters, to the botanical garden, an institution established under the auspices of Vice Counsellor, Dr. Cellers, a naturalist, sent out by the Court of Berlin, and who had travelled through almost every part of Brazil, had interested himself very much in the success of this establishment, it having presented him with many botanical specimens. I regret, to add, that this indefatigable and scientific traveller lost his life while bathing in the river Doce.

The Villa Rica City is, however, likely again to be of considerable importance, being the capital of the mining districts. It will, as the country grows richer, become a considerable depot for manufactured goods—being in the high road to the diamond districts and provinces of Matto Grosso, Goyaz, and Esperito Santo. The provincial Senate of the Menas Geraes have had much speculation on the prospect of opening the navigation of the river Doce, and thus obviating the tediousness and expense of land carriage to the capital. The Rio Doce has its origin in the Sierra of Mantiqueira, and after being joined by the river Saint Antonio from the northwest, runs through an extensive territory, abounding in cattle, rich pastures, and productive woods; and eventually empties itself into the ocean in the province of Esperitu Santo, about four leagues to the northward of Cape Frio. This river is deep, broad, and studded with islands, and although there are three or four falls on it, yet it is supposed that for its navigation, locks on the principle of our canals might obviate these difficulties. One very great obstacle attendant on the prosecution of any work undertaken to render this river navigable, would be the difficulty of reducing the Indians who dwell on the banks of this river, and who are of a savage nature, and in constant war among themselves. From experiments that have been made in washing parts of this river, the sand has been found highly auriferous, and large pieces of virgin gold have been discovered at various points.

Villa Rica, if it could avail itself of such internal navigation, could *drive* a large and thriving trade, its neighbourhood abounding with iron, copper, cattle, corn, and other products; but, indeed, I fear the day for overcoming the obstacles to the work is far distant. It has always been the case, that the pursuit of gold unhinges the mind for more sober and steady pursuits, and we fear these miners will not be an exception; there has, however, been a project for establishing a company in England for this purpose, with what success I know not.

In Villa Rica we visited the smelting house, where the gold dust is received and the tax to government, called "the quinta," paid on it; this tax has now dwindled to a very small sum, though, in 1713, the royal fifth amounted to nearly half a million. This decrease in the revenue is not owing to the deficiency in the product of the mines, but to the large quantities smuggled out of the province.

After passing a few pleasant days here we pursued our route to the famous mine of Gongo Socco. On leaving the city, within two miles of it, is a singular ravine, the remains of an old gold washing, where acres of cascalhao or auriferous earth must have been washed away. On the left side of the rock we entered a small mine called the "Paradao mine," but as it had only just commenced working we could form no idea of its richness; of two specimens of the lode cut out of the level we entered, one contained a large portion of arsenical pyrites, and the other a quantity of silver and lead.

First stage, eight miles to Marianna, a pretty town over a tolerably good road, though fallen much into decay. Its situation is much preferable to Villa Rica—the streets are wider and more regular; there is, also, an appearance of more extensive trade and greater bustle. The population is rated at from four to five thousand; there are two or three fine churches, and several fountains of good water.

We called on Mr. H., who was, however, from home, but had many hospitable attentions shown us by his lady. We dined the next day at a Senor Ferreras, where there was a banquet quite in the Brazilian style—soup, stewed fish, boiled meat, with rice farinha, and feigao.

My friend, Mr. H., having determined to wait for our baggage mule, I set off alone for the celebrated mine of the Brazilian Mining Association, called Gongo Socco, but had not proceeded far before I was caught in a tremendous deluge of rain—the road was particularly wild—now ascending a steep hill, then winding by a deep ravine, till at last I came to a deep and rapid river about 80 or 100 yards across, quite swollen with the rain. My faithful little black boy Tom, who was my sole attendant, and myself, were now completely nonplussed—the rain was coming down in torrents, and not a habitation within miles—fortunately at the moment appeared a horseman, who assisted us over, and in the ferry our mules were at times lifted off their feet. We arrived at the small village of Bento Rodrigues, a little before sunset, and so unsociable is man sometimes found, in this as well as every other country, that the venda keeper refused me shelter; after much address, and many honied words, they admitted me; but their subsequent treatment was civil in the extreme—they cut grass for the mules, a traveller's first care, procured coffee, lent me dry clothes, and in the morning, after a capital breakfast, were, with difficulty, prevailed on to receive any payment.

In the morning the weather was most beautiful, and the sun shone in unclouded splendour. I now began to feel my poncho and boots lighter, and enjoyed the scenery around me. Every where I could perceive the remains of larvas or gold washings, the earth that remained appeared highly ferruginous, and it is only in connexion with iron, either in earth, or ore, that gold is found. In fact, the richest ores are produced from Jocotinga, a micaceous iron ore, and from ferruginous quartz.

About noon I passed through the village of Inficionado, then the head quarters of Mr. Morney, the chief commissioner of the Cocaes Company. His house stood at a short distance from the road, and although he has the reputation of being very hospitable, I was too anxious to avail myself of the weather, to stop to pay my respects. *Apropos des bottes*—this same Cocaes Company is, without exception, the most farcical affair among the thousand and one bubbles of mining speculation. Without having purchased a mine, or taken a single step towards such a preliminary, the company sent out a chief commissioner, machinery, and clerks; on their arrival they commenced their journey up the interior, more after the fashion of an eastern cavalcade than a commercial company—every where their fame preceded them—the prices of mines doubled and trebled, and, at last, from their migratory nature, having acquired from the natives the soubriquet of the "Companhia Viagante," they settled down in this spot, where they commenced boring for gold; they had spent upwards of $220,000 from the outset, yet still without hopes of a return. This company have since purchased a piece of mining ground from the Conde de Linhares, at Bata Branca, for 80,000 milreas, or about $50,000, at the current exchange.

I now passed through Cattas Altas, from which the late proprietor of Gongo takes the title of Baron. Cattas Altas literally means deep pits, and the place shows the remains of old and extensive washings. Here the country began to be extremely wild and barren, and to lose all those features of natural beauty which distinguished the scenes of preceding days. I slept a night at Baradao, a small village not incorporated, and in the morning passed through the considerable town of Saint John, situated about two leagues from Gongo, and the same from Cocaes. I here fell in with the director of Mr. Oxenford's mine, Macaiiba, a Mr. W., and as we were going the same road, I availed myself of his guidance. Our road lay through a ravine, at the bottom of which flowed a river, which we were obliged to cross, and recross, more than half a dozen times. My companion pointed out to me the remains of former lavras, and also an aqueduct, built of wood, and used to wash the Cascalhao; he informed me that the country abounded with the remains of the works of industry and genius, and seemed to think that the aborigines of this district possessed superior mechanical skill to the present owners of the soil. This may possibly have been the case at a period when the natives were thrown entirely on their own resources, without a large slave population to supply every necessary labour.

As we entered the estates of the Imperial Brazilian Mining Association, the country began to improve, and large tracts of trees varied the sameness of the Campos, and as we approached the little village of Gongo Socco, the number of clean white-washed houses, and the spire of the church peeping through the trees, reminded me forcibly of home. On my arrival at Gongo, understanding it was expected, I waited on Lieut. Skerret, and obtained his permission to visit the mine, and there met with a gentleman whom I had formerly known, who hospitably gave me quarters.

The estates of the Imperial Brazilian Mining Association comprise Catta Preta, Antonio Percera, and Ciaba, which abound in wood, water, iron, and gold. The estate of Gongo is that on which the company have principally worked, and during the administration of the late Capt.

Lyon, vast quantities of gold were extracted—in one year alone upwards of 3000 lbs. weight, and in one day, from the receiving book shown me, 141 lbs. At present the mine is not so rich, the levels are extended far under ground, and the expense of timbering them is enormous. The average quantity of gold daily extracted is upwards of 20 lbs. weight, and the current expenses are estimated at 6 lbs. of gold per day, or about $1250. The lode is found in rich veins of jacotinga, and brought up in small locked boxes; the finer part is taken to the washing house, and a small portion of it put into a round wooden bowl, called a "bate," when it is covered with water; this is then stirred up by the washer, and the gold, from its specific gravity, sinks to the bottom, the earth is gradually removed by the washer, and the residuum collected into a mass when the washing for the day is done. The gold dust is then put into a frying pan, held over the fire till dry, then weighed and delivered to the cashier, who gives his receipts for the same. The coarser mould and stone, which is brought from the auriferous vein, undergoes a different process. It is put under a stamping machine, into which fall a multitude of perpendicular shafts of wood, weighted heavily with iron; these shafts perform the part of hammers, and bruise the stone which is placed in the stamping trough. This trough has an aperture by an iron plate, perforated with a number of small holes; the earth is moistened by running water turned into the trough, and forced by the stamping heads through the holes into canvass, or other troughs, at the bottom of which are hides, with the hair placed upwards. The earth containing the grains of gold, washing over these hides, deposits them in the hair, and the hides are, from time to time, taken up, soaked in vats, and the gold extracted. In Gongo these stamping engines are turned by steam, though in other mines, where water can be procured, the machinery is moved by a large water wheel.

The introduction of this kind of machinery has formed a new era in mining speculations; the natives had no idea that gold was to be procured except from washings, and when they had bored the side of a mountain, they made no further efforts in that quarter; but since the introduction of stamping machines, places formerly abandoned have assumed an importance, and now yield richer returns than under the original management. On the estate of Gongo they have abundance of iron, and have established a blacksmith's shop at the mine, for the manufacture of articles in common use. The complaint against the iron is that it is too rich, and though excellent for welding and for the manufacture of wrought iron, yet unsuitable for casting—this defect arises from want of sufficient *carbon* in its composition. I had four capital horse-shoes made here, which, from their subsequent wear, showed the excellence of the metal. Whilst in the smithy, a trough was shown me from which a piece had been snapped off accidentally a few days previously, in which was found a large piece of gold. I saw the fragment afterwards at Mr. Baird's house; the trough came from Baradas, a small place, a short distance from Gongo.

Latterly large quantities of gold had been stolen from the mine, in spite of the vigilance of the overseers. In the neighbourhood reside numerous receivers of stolen gold, and it is notorious that more Gongo gold dust is exposed for sale than from any other mine. I was subsequently offered, in Sabara, about three quarters of a pound weight of Gongo gold, which convinced me that it could not have been honestly obtained, and on declining the purchase, hinted such suspicions to the vender.

We were told in Gongo of a humorous mistake his Majesty, the Emperor, once made, when on a visit there, about a piece of gold shewn him by the superintendent as a very fine native specimen; he received it with thanks, appeared to understand it as a gift, and deposited it in his pocket, much to the chagrin of the unwilling donor. Whilst in the gold wash house, there was a bate of jacotinga afterwards washed before their Imperial Majesties, and the result, amounting to nearly a pound of gold, placed at the disposal of the Emperor.

From Gongo I proceeded to the well known mine of Cocaes, passing again through San Joao. I had a letter of introduction to the proprietor, who was one of the Deputies of the Province, and whose brother, Senor Modesto C. P. Coelho, received me in the most friendly manner. He accompanied me to the mine, which is on the summit of an auriferous ridge of mountains; that part of which he was the share-owner comprised a longitudinal extent of six miles, and a breadth from a quarter to half a mile. I entered the principal level, which was wide and long, the timber work had sunk to an angle of nearly 45 degrees, giving it an appearance of insecurity; this was not so much owing to the soil as to the injudicious plan of timbering which had been adopted—the cross pieces, at the top and sides, not having plank of sufficient breadth to rest on. The lode was of micaceous iron ore, or jacotinga, intermingled with quantities of stones containing gold. Various shafts have been sunk, and one to the depth of 240 feet: the vein was not rich, but gave indications of improvement. A moderate sized bucket of the vein taken out and washed in my presence produced about the eighth of an ounce of gold in grains of various sizes. The gold was rather above the standard quality, but from its colour must have been slightly combined with palladium. As yet, they have, not in this district, adopted the method of stamping the lode, otherwise the result of the land would be much more profitable. In conversation with Senor Modisto, he stated to me how indignant he and the other Cocaes proprietors were at the Cocaes Company, who had assumed a title to which they had no right, and which conduct had effectually prevented their purchasing a mine on that spot. There is a singularity in the formation of the Cocaes gold mines, which is not met with elsewhere: the cascalhao of jacotinga, which is generally found at some considerable depth, and in thin strata, is here very near the surface and in prodigious abundance. At times, months elapse without doing more than paying current expenses, when suddenly the mines discover large bunches of gold of 30 or 40 lbs. weight, frequently in lumps of two and three ounces, or prills of smaller weight.

Cocaes is a small and pleasant village, built quite in a valley; there are some very good houses in the neighborhood, and the people have the character of being very friendly to strangers; here, as usual, the parish church was a prominent building, and it was an idea that often occurred to me, how indefatigable the ministers of the Catholic Church are in their vocation. There is no spot, however humble, without its church, and in spite of the devotion, almost bigoted to their own creed, the Brazilians are remarkably tolerant to those differing from them. The clergy here are paid by the government, and are eligible to serve as deputies. Perhaps the ambition for this honor, may make them anxious to have the direct and indirect suffrages of all classes, and thus lead them to adopt the conciliatory manners for which the clergy of Brazil are so distinguished. I returned to Gongo the same day, and again inspecting the mine, found a sensible difference between good and bad engineering. At Gongo every thing had been laid down on a scientific principle; the levels were neither so wide nor so high as those at Cocaes, nor is it by any means necessary for ventilation that such should be the case, the ventilation depending on the equilebrium or difference of temperature between the neighboring columns of air.

The mines here were extremely healthy, and very few deaths had occurred since the commencement of the establishment, either by disease or accident. The mean temperature of the air was about 74° to 76°, and according to the nature of the work, whether wet or dry, the labor was proportionate.

I regret that my knowledge of geology should be so limited as to be unable to add any thing further of interest on this important colony.

I left Gongo in company with Mr. H., and arrived early at the small village of Castle. Whilst rambling through the village we were accosted by an official beadle, and taken before the Juez de Pal, to shew our passports, and after a minutes interview, dismissed with much civility.

We passed the next day through the Macaiiba mine, of which Mr. Oxenford is the commissioner, and I think part proprietor, and who was the original contractor for the Gongo Socco mine. Macaiiba mine is open and rocky, the stone is shot down into the ravine or valley by a wooden shoot of singular structure. Through the valley runs a fine stream of water which feeds the stamping engines; this estate has fine capabilities for improvement, possessing abundance of wood and iron, but, as it was Sunday when we passed through it, we had merely a glance at it.

The same evening we arrived at the town of Sabara, which we intended to be the limit northward of our journey. We procured decent accommodation at an inn, such as it was, and made up our minds to stay a few days. Sabara is a large and flourishing town, containing 6000 or 8000 inhabitants, situated on the Rio Dos Velhos; it is built with considerable regularity, and ornamented with numerous churches and buildings. The town is well supplied with water and agricultural produce, has its *newspaper*, and is altogether an agreeable place.

Through the politeness of a gentleman, to whom we took letters of introduction, we were made acquainted with the ouvidor of the government smelting house, and were permitted to view all the operations of fusing, purifying, smelting, casting, assaying, and marking. The process was extremely simple, and the officers engaged in the operation were very anxious that we should make ourselves sufficiently acquainted with the detail. The gold dust having been weighed and deposited in a crucible, which is generally of black lead, is covered with a portion of glass. When it begins to melt, small quantities of corrosive sublimate of mercury and flux are thrown in, from time to time, and the heat is augmented until the gold begins to boil. When it has boiled sufficiently long to be purified, of which the conductor, from long experience, is generally aware, it is poured out into moulds, rubbed with grease, and cast into one or more bars, according to the directions he has received. The bar is then taken, after having been immersed in water, into another department, weighed, and stamped with the Brazilian Arms. From thence it is brought into the assay office, where its toque or fineness is ascertained. The word 'toque' literally means 'touch', because the bar is rubbed on a stone; and by a comparison of its mark with that of those on another touchstone, its fineness is ascertained. The fineness, weight, and number, is then stamped on the bar, and a printed paper, or guia, given to the owner, declaring its standard value and weight. With this 'guia', it becomes current standard value, and a legal tender, all over Brazil.

These gold bars are of very uncertain fineness and qaulity. I saw some from the Hubeira mines which had only the toque of sixteen carats; the other eight carats, being palladium and titanium, and from the very same mine, bars of gold of twenty-two carats, which is the fineness of English standard gold. The former bars I mentioned were of the color of zinc, and to an inexperienced eye would have been regarded of little value. It is a very common practice of the dealers to gild their bars; they then assume a beautiful appearance, and unless the buyer is acquainted with the toque, he is very likely to pay dearly for a comparatively worthless article. The frauds practised in this department of commerce, are innumerable, as it is very usual for dishonest parties to mix brass filings and other metals with the dust. The gold dust found about Sabara, is much alloyed with palladium, platina, titanium, and rhodium, and as yet no method of disuniting their combination has been discovered. At the smelting house all gold brought in by foreigners pays a quinta, or fifth, whereas the Brazilians only pay one twentieth. The quinta from the Gongo mine last year amounted to $125,000, and paid all the expenses of the provincial government. From the unskilful method of smelting, the dust generally loses, during the operation, three to six per cent., in addition to the quinta; and for many years representations to this effect have been made to the Brazilian government, accompanied by a request that it would allow the gold to be exported in dust after paying the usual rate. I hear that latterly this boon has been conceded.

Before leaving the smelting house, I was shewn a crucible which had smelted 27 lbs. Troy, of Gongo gold, which was cast into one bar; its value would be about $6000.

In the afternoon we visited the cabinet of Mr. Vas, which was full of mineralogical treasures: amongst them may be mentioned some octahœdron crystals of gold, which are rare. Specimens of crystals of lime and titanium, and various kinds of cornelians, amethysts, and emeralds, from the intermediate neighborhood. We were also shewn some granulous platinum, found at the village of Largos, a little to the northward of Cocaes. This metal was discovered many years ago in considerable quantities in this place in the alluvial soil, which was impregnated with gold and black oxide of iron. It was found accompanied with osmium and irridium in rough grains; but the consumption of it is so trifling, and the expense of procuring it so great, that the pursuit of it has been abandoned. Whilst at Sabara, I regret, I had not time to visit the curious lake mentioned by Southey. The following is his description of it, which sounds somewhat marvellous:

"The lake is about twelve miles distant from Sabara, two miles long and one broad, and its crystaline and tepid waters are efficacious in many diseases. In its centre are various springs, and when agitated it is covered with a pelicle or thin skin of the color of mercury, which disappears by blowing on its surface, but leaves the lips of those who drink silvered."

Not far from Sabara is the Sierra Fria, or cold mountain, celebrated for its mineral riches; the circumjacent parts are called the Diamond Districts, and in various streams, intersecting, are found aqua marines of large size.

I had a good deal of conversation with Mr. V. about the practicability of visiting this district, and found that government willingly grant passports to respectable individuals for that purpose; unfortunately time would not permit me that pleasure. It appears that this region has very peculiar geological features, being wild and sterile to the utmost degree. The diamonds found are of various sizes and waters, are discovered in the Sierra, as well as in the beds of rivers. The searching for them, and washing them, is an almost similar operation to that adopted in the topaz mines, only, being a government monopoly; the laborers are more narrowly watched. As a stimulus to exertion, a slave, on finding a stone of 17 1-2 carats, is entitled to his freedom, and receives clothes and gratuities, and the other stones, of less weight, entitle the finder to a proportionate remuneration. Mr. Maive, who visited this district, states, "That the diamonds are generally found in a loose, gravel-like substance, immediately incumbent on the solid rock, covered by vegetable mould and recent alluvial matter; this gravel principally consists of rounded quartz pebbles, of various sizes, mixed with sand and oxide of iron, and enclosing rounded topazes, blue, yellow, and white, with grains of gold."

In some parts of the diamond territory of Sierra Fria, the gravel is cemented, by means of the oxide of iron, into a considerably hard conglomerate, forming rocks and low hills. On the sides are water courses produced by the torrents during the rainy season, the beds of which are unequal and excavated. In these hollows, diamonds are discovered, the smaller ones, are of no distinct value and are ground for the purpose of polishing and cleansing the larger ones. Sabara is a town of considerable trade, several foreigners having come up to settle here, and seem to live on good terms with the Brazilians, who treat them without jealousy. We left this town for the mine of Andre Gomes, situated on the banks of the Rio Dos Velhos. The proprietor tells the following story of his great grandfather, which has been traditionally handed down as a well authenticated fact. He was one of the Paulistas, who came up the country in search of gold, and on the very spot where we were, the invading party fell in with a tribe of Indians, in which were three old men, distinguished by a profusion of gold ornaments. With these old men they made an advantageous treaty, calling the river after them, the Rio Dos Velhos, a title which it still retains. They here built a church, still standing, and founded a town, but the latter is deserted, the inhabitants having removed to the more thriving town of Sabara.

This anecdote leads me to remark on the advantages which the formation of mining companies afford to new and uncultivated countries like Brazil. The first labours of these companies are directed to clearing the ground, breeding cattle, and implanting a taste for the imports of more civilized countries, thus giving the most direct encouragement to agriculture and industry, by facilitating the consumption of the produce of the one and the sale of the manufactures of the other. Industry thus finds employment, and commerce a vent, whilst the gold, after paying for the labor and necessaries employed in its production, affords a return to the individuals of enterprise who have thus embarked their capital.

From the mine of Andre Gomes we proceeded to Morro Belho, the mine of the late celebrated Capt. Lyon. On our road we picked up some beautiful flat-sided double pyramided crystals, and noticed an abundance of cork trees growing wild; their bark was neither so white or firm as that with which we are acquainted in commerce, but I have little doubt ordinary care taken with their cultivation would materially improve their products. Growing here likewise, was the *herba de cobra*, or snake root, considered efficacious against the bite of these animals, the juice being applied as a styptic to the wound.

On arrival, we sent in our cards, being personally unknown to Captain Lyon, and found to our extreme regret that he was from home, but were most courteously received by Mr. W., the joint proprietor, who lives here, principally, for the advantage of climate and objects of science. After an excellent dinner, and delightful evening spent with Mr. W. and the gentlemen of the establishment, we retired to enjoy a truly luxurious nights repose. We rose early the following morning to view the mine and estate. The house is large and commodious, and the accommodation quite on a scale of comfort; at some short distance from the house, and beautifully laid out in a valley, is the garden, which is in a high state of cultivation, and produces all the vegetables of a more temperate climate. From the garden we went to the mine, and found our host superintending the blasting of the rock which contained the lode; the mine was the remains of an extensive washing, the alluvial earth had been bared to the rock and then neglected; the former owners not understanding that any further source of wealth was left. The operations of this mine are reduced to considerable certainty with respect to the result, the lode is of vast extent, and almost inexhaustible: its formation is blue quartz, containing grains of gold of exceeding fineness. The result of about 12 cwt. of the lode, stamped, produces nearly five ounces of gold. Some fine specimens of feltspar were discovered on blasting, the existence of which, in this country, has been denied by some geologists.

The process of blasting is carried on at great expense, the gunpowder being brought from England, and from the carelessness of the blacks frequent accidents occur, and one, where several had lost their lives, happened a few days before our arrival. Captain Lyon's collection of gold specimens, is, I should think, unrivalled. From his occupations he had frequent opportunities of enriching his museum, and its extreme beauty so struck Don Pedro, who staid here two nights, that he absolutely begged it; but Capt. Lyon very respectfully told him that any specimens he wished were quite at his command, but he could not part with a collection which had taken him so much time and expense to collect. The imperial party were highly gratified with their visit, and the Emperor, casting aside the cares of royalty, used to walk about in his cotton jacket, talking, laughing, and dragging the worthy Captain after him over every part of the estate. They relate that he was passionately fond of the Empress, and that her sweet 'mon ami' would instantly engage his attention, however occupied. We left Mr. W. in the course of the day, for whose obliging attentions and hospitality we could not feel too grateful.

We arrived the same evening at Bella Fanea, the mine of Colonel Trolle. This estate bounded several others, which were rich in gold, and through which flowed the Rio Dos Velhos, mentioned before. The immediate mine of Col. Trolle was of a different formation to any I had seen.

It was situated in the heart of an old lavra, but the miners had sunk a shaft about 18 fathoms below the ground or grass, and had fallen in with a lode of blueish white spar, which, on being broken, shewed grains of gold, differing in size.

This lode is supposed to run a very considerable extent under ground, and although they have sunk through several feet, they have not yet come to its termination; it is very rich, and in 12 hours, with 6 head stamps, gave 22 oitavas of 22 carat gold. Col. T. is just the man to make a mine succeed. Dressed as a miner, he is out all weathers, either drilling, or superintending the various operations.

I was presented here, by Mr. Waller, with a small quantity of the finest gold, which was almost like pulverized dust; its toque was nearly 23 3-4, or within a quarter of a carat of purity, procured from washing the sands of the Rio Dos Velhos. As this is a winding stream, at certain turns on the banks, the water has a sort of whirlpool motion: these are called "Corgos," and after heavy rains the cascalhao, or alluvial soil, washed from the auriferous mountains, rolls into the river, and, attracted by these eddies, the grains of gold, from their specific gravity, drop to the bottom; when the rains subside, the gold and sand are brought up, washed, and the product is the fine gold above mentioned. Any person, with ordinary success, can easily earn a patara, or about thirty-four cents per diem, by river washing, and as about one-fourth of this sum will well provide for the wants of common labourers here, it contributes to the *indolence of that class, and few will work when not pressed by present necessity.* Mr. W. humourously suggested a plan to me, which I think has more earnest sense in it than the many thousand schemes which the year 1825 brought forth. It was, to wash this river on a large scale, by constructing a machine for raising the auriferous earth—the machine somewhat similar to those used with us in cleaning docks, and having the earth thus raised, washed on board—a very small capital, and three or four hands, would be sufficient to try the experiment; at every turn canals might be cut, and the river drained, and it is difficult to say what mineral treasures this celebrated river might have in its bed.

Being in the heart of the gold district, we visited, during our stay, several gold mines, among which was one purchased by an English company, and about to commence operations. This was the Santa Rita mine, now called Morro de Gloria, and has long had the reputation of being extremely rich, but abandoned by the proprietors from differences among themselves. I noticed more system pursued in the washings than I had hitherto seen among the Brazilians. The principal shaft called "Mina Rica," or the rich mine, had a descent of 45 fathoms, at an angle of about 35 degrees, and a railway reaching from the entrance to the extremity. I penetrated some depth, but found the bottom part of the shaft under water—this shaft shewed gold in four places. The lodes on this estate are of different kinds, that of the "Mina Rica," hard quartz, and of a blue colour, whereas, on another part of the estate, the lode was soft and white, like sandstone.

The same night, after following the course of the Rio Dos Velhos for some miles, we crossed over a well constructed wooden bridge, and after some hours hard riding we came to the small village of Rio das Pedras, or river of stones, where we found nothing very remarkable, and our accommodations at the venda were most wretched.

Next day we breakfasted at Coxoeira de Campos, three leagues distance, and passed a deserted looking military building, a palace belonging to Don Pedro, and the same night arrived at our old quarters at Capao, after a journey of thirty miles over a very rough road and beneath a broiling sun. About a league before arriving at Capao, my poor and faithful horse stood still from sheer exhaustion; I took the saddle off, and encouraged him in every possible way to proceed, but the poor beast was regularly done up; at last, after much exertion, we got him to Capao, where he was bled. I could not find in my heart to turn there adrift so docile and true a beast, so we resolved to lead him on by easy stages to some decent hazienda, where we could leave him, with perfect assurance of good treatment. I sent my boy forward with the horse, and rode on to Chapado, four leagues, crossing the foot of Serra Branca, after riding along its base to Redendo. Chapado is certainly romantically placed; the mountain road is extremely wild, and on either side are to be seen the pretty villages of Solidade and Congonhas. The aspect of the latter was particalarly pleasing, the houses nicely white-washed and looking fresh and clean. Congonhas derives its name from the quantity of the plant of that name found here. In infusion it is used here, and throughout the country, as an evening meal, like tea, and is considered a very wholesome beverage in febrile complaints. It grows, like the water cresses, by the sides of the rivers, and, in appearance, is somewhat similar to a willow, to which the leaves are very analogous. The leaves are plucked green, and when packed, being first dried, in small bales, form an article of considerable export into the interior, where, tea from China, is scarcely known. I think, in appearance and taste, it is very similar to the Paraguay herb, which is more generally known by the name of mate.

When we arrived at Redondo, late in the evening, neither boy nor horse had appeared; it was now sunset, and on inquiry at our venda, we found it impossible to procure change for the Rio notes we had with us, and not wishing to incur an obligation we could never repay, called in our host and frankly told him our condition; he, on this, offered us free quarters, which we declined, and determined to push on to Sassuy, a considerable village, where we were informed good accommodations could be procured, and change for our notes given us. This trivial circumstance shows us one of the disadvantages of travelling here, as it is quite indispensable, in case of a long journey, to carry some thirty or forty pounds weight of copper money to pay current expenses. We left orders for the boy and horse to follow in the morning and requested the venda-keeper to treat them well, which he promised, and faithfully performed. It was nearly dark when we recommenced our ride, and it promised to be sufficiently dreary and fatiguing. After having followed the path directed us, for some hours, we found, to our extreme vexation, we had lost our way and got into a situation extremely perilous. We crossed, with some difficulty, a rapid stream, and the night being now pitch dark, left our mules to pick their own way; mine suddenly made a stop, and spurring only made him more obstinate and restive; thinking something might be in the path, I stretched my neck out, and through the gloom saw an open lavra, a very few paces on my left hand, down which had my mule fallen, certain destruction would have befallen both. I was now not less anxious to stop than my beast, and called out lustily to my companion to keep a good look out. After wandering for nearly an hour in great anxiety, we at last got directions for the road, and after an hour's ride arrived thoroughly knocked up at our poso, having been, with the exception of three hours rest, about eighteen hours on horseback, and travelled upwards of forty miles over a very rough country.

We awoke next morning refreshed and well; the venda was kept by a Captain Maya, and our accommodations were really excellent. From here to the Ogo das Aguas, is three leagues. On the following day the boy came up with a bridle in his hand, having left the horse at a farmhouse, we therefore, felt satisfied he had got into good quarters. To-day we pushed on to a small village about three leagues distant, called Lagono Dorado, from the riches it contains, having passed through some beautiful farms on our way, the surrounding country being in a state of high cultivation. This lake is highly impregnated with auriferous sands, and large bunches of gold have, occasionally, been found in it; indeed, the lavra here is so rich, that the Emperor made a point of visiting it; the formation is of soft sandstone and of an argillaceous consistence.

Arrived next day at Prados, a small, neat looking town, where we were kindly received by Mr. R., and shown over his mine. Thence to San Jose del Rey, once a very large and flourishing place, but now, in consequence of the trade having left it for San Joao del Rey, its importance is greatly diminished. This town is situated on the Rio dos Mortos, at the foot of the bleak looking serra of San Jose; it is celebrated for its fine church—the Matrix supposed to be the most beautiful in the province. The population does not exceed 2000, at present, and there is an air of desolation about the streets, somewhat unpleasing. The Rio dos Mortos, the washing of which affords a livelihood to the lower people here, is so called from the battle which took place between the Paulistas and the aborigines; so great was the slaughter that the river, itself, was tinged with blood, and filled with the bodies of the dead. The river still rolls on—"*labitur et labetur in omne volubilis avum*"—but the passions which once disturbed its current are stilled and stopped for ever.

We waited on Mr. Milward, the chief commissioner of the mine here, were very hospitably received, and had the pleasure of making the acquaintance of Capt. Lyon. The mine I did not visit, but was informed that the lode is of white spar, showing gold, and here mills have been lately erected for the purpose of amalgamation. The gold dust, impregnated with various alloys, has a great affinity for mercury, and on being stirred up in the vats, by an iron rod, amalgamates with the quicksilver, readily forming a kind of paste. The mass is then placed in leathern bags, and being squeezed, the mercury exudes, leaving the gold, as a residuum, in the bag. There are, of course, several minor details necessary, and the process requires great judgement, but the nature of the operation is as above mentioned.

We left San Jose on the following day, and proceeded to San Joao del Rey, a large and flourishing town three miles distant, known as the seat of an English mining company, and the great commercial emporium of the Minas Geraes. This village is well built, the streets clean and wide, and the shops filled with English manufactures. It possesses so many natural advantages, and its climate is so agreeable, that it was at one time in contemplation to remove the seat of government to this place. The population is about 9000, and the inhabitants are remarkably attentive and courteous to strangers. We ate our New Year's dinner with Mr. Herring, the chief commissioner of the English Company, and after dinner went to a Brazilian party, where we saw most of the belles of the city; we had some very good music and singing, and danced with our charming friends until an early hour in the morning.

Next day, visited the mine which is situated on the remains of an old lavra; the formation of the country was of sandstone and mica slate; the lode was of crystalized quartz, containing particles of iron, manganese, and antimony. We descended one of the shafts to a considerable depth, but found little to gratify our curiosity. On extracting pieces of the lode with a pick, in some of the cross branches, we discovered grains of gold. In one part of the mine we were shewn a rock which fell on a party of blacks, while they were working, and which, unhappily, ended their labors and lives at the same time. Also, the pit which Dr. Walsh describes as the centre of so much riches, but it appears that the Doctor, on this, as on many other topics narrated in his amusing work, has been egregiously misinformed.

Visited, also, the remarkable cave, about two leagues off, recommended to us by Capt. Lyon. It consisted of several caverns formed in a ridge of limestone rocks situated in a plain. In an antechamber leading to the large cavity there was a piece of calcareous spar, pendulous from the roof, in form and appearance, similar to a chandelier. The roof was covered with droppings of spar, and appeared as if in many places supported by pillars composed of stalagnite, which commencing in a drip from the roof had formed columns whose base rested on the ground, and so numerous that they gave the caverns, in many directions, the look of gothic aisles. The ramifications opened into wild glades, so that wherever we issued we found ourselves in some solitary and sequestered recess of the most romantic character.

These caverns would doubtless afford a rich treat to the geologist, and I much regret that my ignorance on the subject prevents my giving a better description of them.

On our return to Rio de Janeiro stopped at Povoado, through Diogo, about thirty-five miles journey. Next day we arrived at Capetao Mors, through the Pirano, about twenty-four miles. We now lost sight of the sameness of the Campo and entered into the woods. The rain was heavy and incessant, and being prevalent at this season of the year, made the roads very heavy, and travelling most tedious.

Passed through the Rio de Peze, about three leagues, and after another three leagues came to an Indian village, where we passed the night.

Breakfasted at Funil, a capital venda, and arrived late in the afternoon at Rio Preto, drenched to the skin. Rio Preto, or the Black River, forms the boundary between the provinces of Minas Geraes and Rio de Janeiro.

The river is extremely rapid and dark, and can only be crossed by a bridge. Here the toll house is established on the Minas side, and no person is allowed to enter the province without being provided with a passport and paying a certain duty. Our venda was kept by one of the prettiest Brazilian girls I ever met with, who endeavored, by her kindness and civility, to make us quit this province with agreeable recollections. Next day we took our departure from the province of Minas Geraes, which, as a tract of country, is, perhaps, for beauty, fertility, and resources, not surpassed by any in the world. It possesses within itself all the seeds of a great empire, a delicious climate, rich pasturage, vast woods, rapid and fertilizing streams and every variety of mineral treasure. Some portion of it is still occupied by the Indians. These Indians are composed of a vast number of nations, and are divided into various tribes, whose subsistence is derived from the chase and from fishing, from abundance of wild honey and fruits.

Their method of government is extremely patriarchal, the elders forming a council, and dictating laws to the younger of the tribe. They perforate their lips and nostrils, and insert in them pieces of wood. The Bootocades, the Tupinambas, and the Goycatazes, are the most known. The latter nation principally inhabit the denser part of the province of Rio de Janeiro, and the traveller will generally meet them crossing the rivers in parties, but, either from want of curiosity or habitual listlessness, they seldom deign him a word or even a glance.

Their habits are inoffensive, their only weapons are the bow and arrow. Their habitations, built in a few hours, are deserted when the game becomes scarce. These are constructed of branches of trees, with slanting roofs, to keep off the rain, and thatched with the palm leaf and angola grass matted with the fibrous bark of trees. They generally settle on the margin of some limpid stream, sheltered by forests, and secluded from mankind.

Some years ago the Jesuits devoted much time and attention to the conversion and civilization of the Indians in the interior of Brazil, and many of these tribes were induced to renounce their savage habits, but after the expulsion of this order, the institutions fell into decay, and the Indians returned to their former habits.

Arriving next day at the small, but well built town of Valenca, we left it on the morrow, and after ascending a steep serra, immediately on leaving Valenca, we passed through a very rich and highly cultivated country. On crossing the broad and rapid river of Paraiba, we left, on the right, the mansion and fine coffee estates of the Marquis of Barbacena. It rained all day incessantly, and we arrived almost more than half drowned at Basoura, distant about twenty miles.

To Botaes four leagues, a very rough road, through a more inhabited country, yet still at times going miles without seeing a house. It took us about three hours to cross the steep serra of Botaes, in the midst of the most appalling rain, but on the other side we found very good accommodations in the venda of Senor Joaquim.

From this place it is forty-eight miles to Rio de Janeiro, passing through Pavona and Manganga, which we reached without further incident, after an absence of about nine weeks.

I have little doubt, that at some future day, these provinces will arrive at a great point of civilization and prosperity, but the miserable roads, at present, quite exclude their products from the capital. By opening the navigation of the River Doce, the present tedious mode of transportation by mules would be superceded, and afford facilities for the conveyance of the more bulky productions of the province, such as dye-woods, bread stuffs, &c.

DOCTOR DWIGHT IN 1776.

To the Editor of the National Magazine.

Sir—An intelligent friend, some time ago, called my attention to the remarkable language used by the President of Yale College—the late Reverend Timothy Dwight, D. D.—on a public occasion, *on the 25th day of July*, 1776.

The language is prophetic of the progress of our race on this continent. So far-seeing, at that time, implies the deep foundation upon which this population of ours, then rested their destiny and their knowledge. Modern events are realizing, rapidly, the views presented by Dr. Dwight.

To possess this continent, and to cultivate and adorn it, with all civilized arts. In the language of Stuart, of Virginia—"to establish primary schools, and academies, and colleges, in all parts of the confederacy, until the whole continent shall be *dotted over with them as the Heavens are bespangled with stars.*" Such was the prospect held up at that early day.

I desire to see the remarks of Dr. Dwight published anew, that they may stand in comparison with the actual occurrences of our present day. Showing, as they do, the march of a great system of settlement, proceeding steadfastly—bearing along with it, the plough, the spelling-book, and the Bible.

Yours, respectfully,

Henry Meigs.

A VALEDICTORY TO THE YOUNG GENTLEMEN WHO COMMENCED BACHELORS OF ARTS AT YALE COLLEGE, JULY 25, 1776,

BY THE REV. DR. DWIGHT.

Young Gentlemen—

However happy I might be in enumerating your many good qualities, and dwelling upon your excellent conduct, especially that which respected myself; however strongly inclined to the pleasing, though melancholy task of taking a tender, and affectionate farewell of you, a regard for your interest forbids me to indulge the inclination.

Actuated by that regard, after having, in the name of all the overseers and instructors of this college, confessed the very sensible pleasure you have given us by this grateful acknowledgement of our kind offices, and the greater pleasure we have received from your manly, regular, and amiable conduct, through your whole academical existence, I cannot hesitate to spend this last opportunity, as I have already consumed a considerable period of my life, in attempting your improvement. But that I may promote this important purpose in the fullest and best manner, give me leave to describe to you the nature and circumstances of the country, which will probably be the scene of your future actions. This I will attempt with as much conciseness as possible. If I should enlarge beyond the expectations of my audience, I flatter myself the extensive and interesting nature of the subject will be my excuse.

That part of this vast continent called North America, extends from from the 8th degree of north latitude to the Pole; and, according to the latest discoveries, from the 50th degree of west longitude almost to the eastern shore of Asia. The lands within the Arctic Circle are useless and uninhabitable. Between that circle and the 50th degree of latitude, although the country is incapable of agricultural improvement, yet, considered in a commercial light, it is highly valuable. From thence to the Isthmus of Darien, the southern limit, extends the finest tract on the globe. Its length is between two and three thousand miles, and its breadth, at some places, at least as great.

In such an extensive region which stretches through so many climates, the air being of a very various temperature, is, as we might reasonably expect, in some parts of a greater, in others of a less degree of salubrity. Except the kingdom of Mexico, which feels the usual inconveniences of the torrid zone, we may, in general, observe, that it is as healthy, serene, and delightful as any country of the same magnitude on the earth.

Nor are its advantages of soil less conspicuous than those of the climate. Whatever may conduce to health, plenty, and happiness, is almost the spontaneous product of its fields. Our corn is of every kind, of the best quality, and of a quantity that cannot be measured. Our cattle, and fruits, of every kind, are without number. Our plants, and flowers, for health and pleasure, appear to have been scattered by the same benevolent hand which called forth the luxurience of Eden. All that the wish of an epicure, the pride of a beauty, or the curious mind of a naturalist, can ask to variegate the table of luxury, to increase the shrine of splendour, or delight the endless thirst of knowledge, is showered in profusion on this, the favoured land of Heaven.

Nor are these bounties bestowed only on the earth. The ocean, the lakes, and the rivers, pour forth an unlimited abundance of wealth and pleasure. Commonly, the munificence of the Deity is equally distributed. Where the soil is barren, the sea is fruitful and supplies the defect. Where the land is fertile, the sea is empty and unfurnished. Here, the ocean and the continent were evidently formed for each other by the same open hand, and stored with blessings by the same unlimited indulgence of bounty. That this is the unstrained voice of truth, and not the extravagant declamation of panegyric, might, with the utmost ease, be demonstrated by a bare enumeration of the articles which constitute the furniture of this mighty structure; but as the time will not suffer such an enumeration, and especially as none of my audience can be supposed to be ignorant of them, I shall pass them without further notice.

Were all these blessings bestowed on a country, which, like many in the world, was incapable of enjoying them generally, by reason of a destitution of conveniences for navigation and commerce, a principal part of their value would be lost. But Heaven, resolving that all the circumstances of this continent should be of a piece, has blessed it with naval and commercial advantages, superior to those of any state on earth. Its sea coasts reach on both sides many thousands of miles. Its harbors are safe, spacious, and innumerable. From these an easy, advantageous, and unlimited intercourse may be extended to every corner of the globe. Whilst our rivers and lakes are not to be paralleled in number or size. Perhaps the Mississippi alone furnishes as extensive an inland navigation, as half the rivers in Europe united. Whilst innumerable other spacious streams waft plenty and happiness through the wide regions where they flow.

But all this is insufficient to complete the felicity of a country. If even these blessings, great as they are, were insecure; if they were naturally exposed to the ravages of enemies and the desolations of war, the inhabitants would be miserable amid all the indulgence of Heaven. But to finish the superiority of North America, over every other country, the MOST HIGH has replenished it with every source of strength and greatness. Its present circumstances, which arise from events altogether political and accidental, are no objection to this account. For a war like this cannot with any probability be a second time expected.* I proceed, therefore, to observe, that beside the inconceivable wealth and power, which must necessarily roll in upon this infant empire, from an unbounded commerce, our internal supplies are of every kind, and inexhaustable. Our forests are filled with the finest timber, and exude in the greatest abundance, tar, pitch, and turpentine. Our fields may, with the utmost facility, be covered with hemp and flax. Our provisions can never fail. Our mountains are every where enriched with sulphur, iron, and lead. Our improvements in the art of manufacturing of saltpetre and gunpowder, are astonishing even to ourselves. Our uncorrupted manners, and our happy climate, nourish innumerable multitudes of brave, generous, and hardy soldiers, to improve these advantages, to strike terror into their enemies, and brighten the glory of their country.

But were we destitute of these advantages, it is a most important interest of every nation on earth, to cultivate our friendship, and open their ports to our ships. That this is the case might be easily demonstrated, by a description of the political and commercial interests of the various kingdoms of the world; but this would be the subject of a volume; however, I cannot but observe, that, if any kingdom should unwisely become our enemy, the immense distance between us and them, the consequential difficulty of transporting troops hither, and of furnishing them with provisions when they arrive, (if we are faithful to ourselves,) must blast their brightest prospects, and whelm them in ignominy and ruin.

But the fairest part of the scene is yet to be unfolded. Not all the articles I have mentioned, could spread happiness through the continent, if the manners of the inhabitants were corrupted and luxurious, or their civil government arbitrary and slavish. But a few observations will convince us that political, as well as natural, advantages promise in this western world, the existence of the greatest empire the hand of time ever raised up to view.

The southern and western parts of North America, subject to the dominion of Spain, if we may believe their own historians, are peopled with as vicious, luxurious, mean-spirited, and contemptible a race of beings, as any that ever blackened the pages of infamy. Generally descended from the refuse of mankind, situated in a hot, wealthy, and plentiful country, and educated from their infancy under the most shocking of all governments, the tyranny of servants invested with unlimited power, and sent to make their own fortunes, by squeezing their subjects; a tyranny rendered ten times more horrible by the infernal domination of an abandoned priesthood; can we wonder that they have lost every trace of that generous pride, which prompts to brave, disinterested actions the European Spaniard, and are tainted with all the vices and blots of their parent nation, increased and deepened by an endless multitude of their own? This concise, but very just account of them must necessarily convince us that the moment our interest demands it, *these extensive regions will be our own;* that the present race of inhabitants will either be entirely exterminated, or revive to the native human dignity, by the generous and benificent influence of just laws and rational freedom. A distinction, therefore, between them and ourselves, in the present consideration of the necessary future greatness of the Western World, will be useless and impertinent.

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* This was written during the war of the Revolution.

I proceed then to observe, that this continent is inhabited by a people, who have the same religion, the same manners, the same interests, the same language, and the same essential forms and principles of civil government. This is an event, which, since the building of Babel till the present time, the sun never saw. That a vast continent, containing near three thousand millions of acres of valuable land, should be inhabited by a people, in all respects one, is indeed a novelty on earth. Differences in religion always produce persecutions and bloodshed. Difference of manners, as we are naturally and fondly attached to our own, cannot but occasion coldness, contempt, and ill will. Contending interests ever exist with disputes, and end in war. Without sameness of language, it would be impossible to preserve that easiness of communication, that facility and despatch in the management of business, which the extensive concerns of a great empire indispensably require. Essentially various forms, and unlike principles of government create all the differences I have mentioned, and are consequently the parents of endless contests, slaughter, and desolation. A sameness in these important particulars, cannot fail to produce the happiest effects. It wrought miracles in the minute, microscopic states of Greece. What may we not expect from its benign influence on the vast regions of America. All the great empires of the world, though much inferior to this in extent of valuable territory, and every other natural advantage, were infinitely less our inferiors in these respects, than in the interesting circumstances above mentioned. They consisted of various nations, not so widely separated by mountains, deserts, and seas, as by a discordance of manners, interests, and principles both of religion and civil government. Their grandeur was created by bloodshed, and preserved by despotism. The glory of this New World will necessarily result from the natural increase of inhabitants, and will be widely enlarged, and durably established by untainted principles of policy and religion. The glory and greatness of those States, however, have been the admiration of the whole earth. But when we reflect on the disadvantages which attended them from their infancy, the seeds of decay and ruin which were planted even at their birth, we must necessarily see that their splendour, compared with that of America, was but the twinklings of the day-star, to the full beauty and effulgence of the rising sun.

In the next place, I beg leave to remark, that this empire is commencing, at a period, when every species of knowledge, natural and moral, is arrived to a state of perfection, which the world never before saw.

Other kingdoms have had their foundations laid in ignorance, superstition, and barbarity. Their constitutions were the offspring of necessity, prejudice, and folly. Even the boasted *British Constitution* is but an uncouth *Gothic* pile, covered and adorned by the elegance of modern architecture. The entailments of estates, the multitude of their sanguinary laws, the inequality of their elections, with many other articles, are gross traces of ancient folly and savageness. American empire is designed for more illustrious scenes, and its birth attended with more favorable circumstances. Mankind have, in a great degree, learned to despise the shackles of custom and the chains of authority, and claim the privilege of thinking for themselves. Every science is handled with a candor, fairness, and manliness of reasoning, of which no other age could ever boast. At this period our existence begins; and from these advantages what improvements may not be expected? Our Ancestors, inspired with the same generous attachment to science, as to freedom, have, *by that wisest of all political establishments*, *THE INSTITUTION OF SCHOOLS*, diffused light and knowledge through every part of their settlements. And shall not their sons emulate their glory, in this respect, as well as in a heroic defence of their liberty? They will, they do! The encouragements, universally given to genius and learning, at the present time, are worthy of the sons of such parents. They are worthy of the glorious name of an American. They are worthy of the founders of the last and brightest empire of time. Indeed, this is no more than we might reasonably expect. The generous mind is ever of a piece. The same extensive views, the same exalted disposition, which inspires that sublime enthusiasm, that heroic firmness, that divine patriotism, which like the electric flame, runs, from state to state, with an instantaneous rapidity, ever have, and ever will reach out a parental arm, a fostering hand, to every rising genius, and to every plant of valuable knowledge.

It is a very common and just remark that the progress of Liberty, of Science, and of Empire, has been with that of the sun, from east to west, since the beginning of time. It may as justly be observed that the glory of empire has been progressive, the last constantly outshining those which were before it. The Assyrian empire was excelled by the Persian, that by the Grecian, and all were lost in the splendor of the Roman greatness. This has been equally exceeded by the learning, the power, and the magnificence of Britain. From the first of these remarks, it is evident that the empire of North America will be the last on earth; from the second, that it will be the most glorious. Here the progress of temporal things towards perfection will undoubtedly be finished. Here human greatness will find a period. Here will be accomplished that remarkable Jewish tradition—that the last thousand years of the reign of time would, in imitation of the conclusion of the first week, become a glorious Sabbath of peace, purity, and felicity. This World, not with so much propriety called New, from the date of its discovery, as from the unprecedented union it exhibits of all those articles which are the basis of commerce, power, grandeur, and happiness; this favorite region, by the hand of Heaven sequestered from the knowledge of mankind, till that period when European greatness began to totter, and destined to be the last retreat of science, of freedom, and of glory, beholds a rapid progress towards the consummation of excellence already commenced. Never were the rights of men so generally, so thoroughly understood, or more bravely defended. No country ever saw learning so largely diffused through every class of people, or could boast of so sensible, so discerning a commonalty. What gratitude ought this unheard of assemblage of blessings to rouse in the breast of every person, whose lot is cast in this pleasant land, and who is entitled to this goodly heritage.

Allow me to proceed one step further, and I have done. From every deduction of reason, as well as from innumerable declarations of inspired truth, we have the best foundation to believe that this continent will be the principal seat of that new, that peculiar kingdom, which shall be given to the Saints of the MOST HIGH. That also was to be the last, the greatest, the happiest of all dominions. To these characters no other country wears the least appearance of agreement. This answers the description in every particular. This is emphatically that uttermost part of the earth, whose songs and happiness so often inspired Isaiah with raptures. This with peculiar propriety is that wilderness, which shall rejoice and blossom as a rose; and to which shall be given the glory of Lebanon, the excellency of Carmel and Sharon. Here shall a king reign in righteousness, whose kingdom shall be an everlasting kingdom, and whose dominion shall not be destroyed.

It will doubtless be remarked that in this description of America, I have mentioned several things as present, whose existence is future. The reason is, that with respect to the end, which I propose in this description, the distinction is immaterial. For our actions ought all to be inspired, and directed by a comprehensive regard to this scene of glory, which is hastening to a completion, with a rapidity suited to its importance.

This, young gentlemen, is the field in which you are to act. It is here described to you, that you may not be ignorant or regardless of that great whole, of which each of you is a part, and perhaps an important one. The period, in which your lot is cast, is possibly the happiest in the roll of time. It is true, you will scarcely live to enjoy the summit of American glory; but you now see the foundations of that glory laid. A scene like this is not unfolded in an instant. Innumerable are the events in the great system of Providence, which must advance the mighty design before it can be completed. Innumerable must be the actors in so vast a plot, and infinitely various the parts they act. Every event is necessary in the great system, and every character on the extended stage. Some part or other must belong to each of you, perhaps a capital one. You should by no means consider yourself as members of a small neighbourhood, town, or colony only, but as being concerned in laying the foundations of American greatness. Your wishes, your designs, your labours are not to be confined by the narrow bounds of the present age, but are to comprehend succeeding generations, and be pointed to immortality. You are to act, not like inhabitants of a village, nor like beings of an hour, but like citizens of a world, and like candidates for a name that shall survive the conflagration. These views will enlarge your minds, expand the grasp of your benevolence, ennoble all your conduct, and crown you with wreaths which cannot fade.

NEW BEDFORD, MASSACHUSETTS.

There is scarcely a town in our country, of equal importance, about which so little has been said, by the book-makers, as New Bedford. From Peter Parley, upwards, through the whole catalogue of geographies, registers, gazetteers, encyclopedias, and histories, you shall look in vain for any thing approximating towards a decently truthful account of this flourishing town.

The circumstances of its past history have not been of a charactar to make it known much beyond its own limits, excepting as a community engaged in the very useful, but at the same time, in the world's eye, very humble occupation of lamp-lighters for the country. And even in this, the highest claim which it might be supposed to have to consideration and notice, it has, for the most part, been looked upon as a sort of appendage to its island neighbour, as playing second fiddle to the bold and enterprising citizens of Nantucket; and even now, when the proportion of vessels in the whaling business is five to one in its favour, the readers of most of these matter-of-fact compilations are made to believe, in the absence of all other authority, that its people are still pupils and followers of the Nantucket whalers.

Within its borders, there is no spot hallowed as the first resting place for pilgrim feet, or consecrated as the scene of pilgrim endurance and conflict—no locality made "holy ground" by the sprinkling of blood in the great struggle for liberty. It has grown up to what it may, without boasting, call man's estate, "unnoticed," if not "unknown." Unnoticed, because neither by the deeds of those who are now the dwellers upon the beautiful hill-side which it occupies, or by those of their fathers, has it acquired that kind of notoriety which attracts the attention and calls forth the favourable notice of the geographer and the annalist.

That pursuit in which, directly or indirectly, all its inhabitants are engaged, while it has brought them in, it may be, a fair share of worldly goods, has not been associated in the minds of the stranger with considerations of honourable enterprise and intellectual refinement. The village has been looked upon as a respectable "sort of fishing station," and the operations of its merchants and mariners, and their results, have not been regarded as any more worthy of notice than "the taking of alewives in Taunton River."

A neighbour, and citizen of New Bedford, has forcibly illustrated these views. After mentioning the fact that but little notice had been taken of the town, by travellers or geographers, he says—

"Our location, too, has been, in this respect, unfortunate. We have been out of the way. We live altogether on one side of the great thoroughfares of our country, and the great stream of travel, which is constantly flowing from one end to the other of our land, has passed by on the other side.

"Now, for one, I do not feel quite ready to sit down with this 'fisherman's luck.' In the first place, I cannot feel quite reconciled to the propriety of that deteriorating process by which the operations of our merchants and seamen, whose field is the world, whose gallant ships spread their canvass to the breeze in every sea, whose occupation it is to pursue the mightiest of God's lower creation over their ocean hunting-field, and throw the death-dealing lance under circumstances of excitement and danger, which put to shame the field-sports, even of those who track the wild boar through European wilds, or hunt the tiger over the plains of Hindostan—and whose respective enterprsies are chronicled by the number of years which they severally require for their completion; nor should our noble calling be brought down in the contemplation of the world, to what a native of Martha's Vinyard, whose business it may be to cast his net for herrings in a brook, over which a child might leap, and peddle them from his cockle-boat at nine pence a stick, may consider the true standard of piscatory adventure and merchandising.

"A whale may, or may not, be a fish. Doctor Mitchell died and left no solution of the doubts on that important point; but a hundred barrel whale is not a herring or a flounder: nor is a common fisherman to be regarded as a fitting type of the merchant, whose capital and enterprise sends forth the well-appointed vessel to circumnavigate the globe, in pursuit of her prey; or of the intrepid and intelligent mariner, the Nimrod of the seas, who guides the gallant bark, and fearlessly deals the death-blow as he ranges along side the wearied monster.

"Let Edmund Burke speak for the Yankee whalers. More than half a century ago, that eloquent statesman thus expressed himself in relation to the New England fishermen:

"'As to the wealth,' says Burke, addressing the British House of Commons, 'which the colonies have drawn from the sea, you have that matter fully opened at your bar. You surely thought these acquisitions of value, for they seemed to excite your envy; and yet, the spirit by which that enterprising employment has been exercised, ought rather, in my opinion, to have raised your esteem and admiration. And, pray Sir, what in the world is equal to it? Pass by the other parts and look at the manner in which the people of New England have, of late, carried on the whale fishery. Whilst we are looking for them beneath the Arctic Circle, we hear that they have pierced into the opposite region of the polar cold; that they are at the antipodes, and engaged under the frozen serpent of the south. Falkland Islands, which seemed too remote and romantic an object for the grasp of national ambition, is but a stage and resting-place in the progress of their victorious industry. Nor is the equinoctial heat more discouraging to them than the accumulated winter of both the poles. We know that while some of them, draw the line and strike the harpoon on the coast of Africa, others run down the longitude, and pursue their gigantic game along the coast of Brazil. No sea but what is vexed with their fisheries—no climate that is not witness to their toils. Neither the perseverance of Holland, nor the activity of France, nor the dexterous and firm sagacity of English enterprise, ever carried that most perilous mode of hardy industry to the extent to which it has been pursued by this recent people: a people who are still, as it were, but in the gristle, and not hardened into the bone of manhood.'

"Such was the language of Burke, at a period in the history and progress of the whale fishery, when, in all the essential elements of greatness, it could no more be compared with its present condition, than the craft in which it was carried on, can be compared with those noble and gallant ships, which the enterprise of our merchants, aided by the skill of our 'brothers Hillman,' have sent forth on the circumnavigation of the globe, in pursuit of the leviathan of the deep. If the hardihood, and the skill, and the daring, which then characterized the New England whalemen, and the sagacity which projected and directed the undertakings of the whaling merchant, could call forth this eloquent eulogium from the greatest man of his age, what would now be his language could he, to-day, look upon the enterprise, which, when it was but in the gristle of its progress, thus excited his wonder and admiration?

"The Falkland Islands are no longer a *stage* and resting-place in our progress. The central islands of the Pacific have become halting places for our ships, and the limits of the Great South Sea are the only limits, which the enterprise of our merchants, or the daring and adventurous spirit of our whalemen know, in the prosecution of their vigorous and victorious industry.

"At the period when Burke was thus pleading for New England, and shewing from their gallant bearing and well-directed enterprise, the right of her sons to liberty, and the utter folly of an attempt at the subjugation of such a people, this town of ours, the *world's leader* in this *world-wide* undertaking, had not a name, and hardly the beginning of an existence. And now there are three mercantile houses in the town of New Bedford, which have afloat upon the ocean, engaged in the whaling business, more tons of shipping than were owned by all the American colonies at the period of the Revolution. And further I believe it to be a fact, that there are, at this moment, more tons of shipping belonging to the town of New Bedford engaged in that business, than were employed, at that period, in the same pursuit, in both Europe and America."

Thus far, our neighbour. The view taken by him of the character and magnitude of the pursuit in which his fellow-townsmen are almost exclusively engaged, is, in the main, correct. He may be pardoned the vanity, if vanity it may be called, of again quoting the oft-quoted, eloquent, and just eulogium of the master-mind of England.

We have much sympathy with him in the feeling which prompted his remarks, and under the impression that he has not exhausted the subject, we propose to add a few words, with a view, if possible, to strengthen the impression they are calculated to make.

It is difficult for any one, and particularly difficult for a stranger, to form any thing like a true estimate of the magnitude and character of the business operations of New Bedford. Lowell and Fall River, place at once before the eyes of the visiter the whole extent of their industrial instrumentalities—buildings, stock, machinery, men, women, and children all appear and present an imposing array of ingenious and productive movement; and as the eye takes in the long ranges of towering factories, and the ear is almost stunned with the loud and never-ceasing clamour and roar of the wheels and the furnaces, and the long lines of busy and willing *hands*, all seem drawn up in orderly array to their respective tasks, the mind is furnished with all the elements for the formation of a correct judgement as to the magnitude of the enterprises in which the inhabitants of those towns are engaged.

Our farmers, too, can easily put into the possession of the looker-on the means of a true appreciation of their agricultural operations. Ayrshires, and plough-shares, crops, cribbs, and cattle, porkers, pens, and poultry, smoked hams, and Durhams, long-horned, and short-horned, and no-horned, barns, binns, bulls, and bannocks, fine-top, and red-top grasses, and lasses, bumpkins, and pumpkins, all are to be viewed and reviewed at once; so that the visiter to the prize-farm is not left a moment in doubt as to the agencies of production, the result produced, or as to the right of the proprietor and manager, to the silver pitcher at the next state agricultural exhibition, or county cattle show.

But New Bedford has no such opportunities for display. Its inhabitants have no means for concentrating and grouping the agencies and results of their enterprise and industry, so as to cause them to make a revelation, full and complete, of their claims to the notice and admiration of the world. Scattered over the ocean, each of the floating magazines of skill, perseverance, and labour, puts forth during the course of its years-long adventure, an aggregate of well-directed and vigorous effort, that cannot be paralleled within the same limited extent of operations in any other branch of human industry.

But who can see, who can appreciate this? Alone, on the great deep, afar off, beyond the ken of affectionate regard or intelligent curiosity, these little bands of hard-working, much-enduring, wealth-producing men, in their sea-encircled domain, pursue their toil with an activity that never tires, a resoluteness that crushes in its grasp difficulty and opposition, as the mailed hand of the warrior the feeble opposition of childhood, united with the exercise of a degree of prudence, decision, and skill, which many a cabinet council might vainly emulate. Year after year they pursue their adventurous toil, and, returning, add the fruits of their hardy, intelligent, and errant industry to the world's aggregate wealth, without any just appreciation, on the part of the landsman, of the enormous amount of vigorous and self-denying effort which has been put forth in its accumulation.

Since there cannot be, in reality, spread out before the eye of the observer such an array of the business instrumentalities of the town as will give him an idea of their magnitude, let us, for a moment, call in the aid of the imagination, and sketch a picture which may assist in giving something like an adequate impression of their potential character.

Take the wand of Prospero—

> "And by your art, set the wild waters in a roar,"

that from their various and remote cruising grounds, the New Bedford whalemen, "ordered by the safe provisions of your art," may suddenly concentrate in the offing, and in a single line enter the waters of the bay near which the town is situate. Cast your eye upon that long line of noble ships. The leading vessel has already rounded the light, and entered the harbour, while the last of the fleet has just shot into the waters of the bay. Onward they come, their white canvass shining like a milky-way upon the waters. And now the pioneer ship having reached the northern extremity of the inner harbour, the signal is given, and the two hundred and fifty ships, which compose that imposing and majestic array, come up to the wind, let go their anchors, and are soon to be seen, with every sail furled, quietly reposing upon the waters of the secluded haven. From the channel of the river, afar out, four or five miles beyond the point which makes the southern extremety of the town, almost as far as the eye can reach, extends the line, nearly ten miles long, of vessels which compose the whaling fleet of New Bedford. To the mind capable of grasping in all its vastness and comprehensiveness of the far off scene, of which this splendid array is but the representative, few sights upon which the eye can rest would be more significant or sublime. Another signal is given! and from the sides of the ships are seen quickly to descend more than ***one thousand*** of those buoyant and graceful craft whose speed, when urged through the waters by the sturdy whalers, outstrips that of the fleet monsters who vainly strive to escape from the dart of the hunters of the ocean, are ranged in unbroken line in front of the fleet. Nearly six miles in length is this whaling flotilla, as each boat with head to the north, is made ready to move forward in the pageant which is to exhibit the extent and the potency of New Bedford enterprise.

In that interminable line of boats, floating like an immense sea-serpent upon the still waters of the Accushnett, are seated at the oar more than ***seven thousand men.*** There, ready to display that aptitude, fearlessness, and vigour which is called forth and demanded by their occupation, are to be seen the *operatives* of the New Bedford fisheries. More than seven thousand men, not women and children, but strong, hardy, vigorous men! with powers of endurance, and capacities for labor, not exceeded by any other on the face of the globe, are contained in those little light and beautiful 'skimmers of the seas,' whose motions, like the prancing of the generous steed, seem to chide the delay which restrains them from darting forward over the waters. Four times as many men are there, as composed the American army when at Bunker Hill the British hirelings were taught a lesson which allowed them no longer to sneer at the prowess of American peasantry; and more than composed the army, which on that memorable day, was sent to drive those peasantry from their half formed intrenchments. More individuals are there, than made up the sum total of the inhabitants of New Bedford twenty-five years ago; and although it now numbers not far from sixteen thousand inhabitants, it would take the adult male population of two such towns to furnish such a band of ocean operatives. See, the line has started. Onward they move,

> "With penon streaming and with lance in rest,"

the oars of the light-hearted crews keeping time to the music of their merry songs. Divided into as many detachments as there are ships to which they are respectively attached, they range along before us, and with flags and signals displayed, and exhibiting the instruments of their craft, the weapons of their hardy warfare, one after another, in numbers almost numberless, glide away from our point of observation, and are lost in the distance.

The wand of the enchanter is broken; the vision has fled! We could not follow that imposing array, even if we should imagine that from the *top* of one of the whalers we heard the inspiring cry, "there she blows" arousing into generous rivalry and untiring activity all the energies of the sailor-boy's breast. The pageant has vanished; and having dismissed the assembled ships to their respective cruising grounds, there let us leave them with the expression of the earnest hope

> "That bright success may on their valour wait,
> And rich reward attend upon their toil."

Having, by this imaginary concentration of its forces, attempted to give a general view of the character and extent of the industrial operations of

New Bedford, we shall proceed to give a brief description of the town; a few facts in relation to its history and progress, and some statistics exhibiting the results of the home business in which its inhabitants are engaged.

The town is pleasantly and eligibly situated on the west side of a small estuary, called the Accushnett River, which makes up in a northerly direction into the land near the western extremety of Buzzard's Bay, on the south shore of Massachusetts. It was formerly a part of the town of Dartmouth, which town once included the towns of Westport, Dartmouth, New Bedford, and Fairhaven. It is a half-shire town of the county of Bristol.

It was incorporated in the year 1787. In the year 1812, that portion of the town situated on the east side of the Accushnett was set off as a separate township, retaining the name of Fairhaven, by which it always had been distinguished from the opposite settlement of Bedford.

Nothing can exceed the beauty of the situation of New Bedford. It is built upon ground which rises rapidly from the river, and the view from the opposite town of Fairhavan, and from the harbour, as it is approached from the south, is not exceeded by any town in the Union. It is laid out with much regularity, the streets nearly all forty feet wide, crossing each other at right angles. Most of the sidewalks are flagged and many of the streets are paved. The buildings are mostly of wood, although several of the finest houses and stores are built of a more durable and safe material.

Few strangers who visit New Bedford fail to be struck with the exceeding neatness and beauty of the dwellings in the more elevated portions of the town. Much of this attractiveness is owing to the circumstance, that they are nearly all surrounded by extensive and well cultivated gardens, and that the streets on which they are built are bordered with a beautiful growth and great variety of ornamental trees. County street, which runs the whole extent of the thickly settled part of the town, about two miles, upon the summit of the rising ground on which it is built, is allowed to be almost without a rival in this country for its various and attractive beauties.

Visiters are not only strongly impressed with the beauty of its situation, and the tastefulness and richness of many of its public buildings and private residences, but by the aspect of *freshness* which it every where presents. The large number of newly-erected buildings, particularly dwelling-houses, is an evidence of rapid growth, and of the accumulation of means by which that growth is promoted and sustained; and that nearly all these recent erections, are the neat, but humble dwellings of the trader, the mechanic, and the labourer, is not among the least gratifying evidences of real and permanent increase and prosperity. The desire for a home of one's own, possesses a charm; and the knowledge that the stranger landlord cannot intermeddle with our joys, has, to an extent rarely known, among a thickly settled population, an abiding and active influence upon the people of New Bedford. From this cause is it, that one of the first and most interesting sights which meets the eye of the visiter, is the great number of neat, modest, and convenient dwellings which are spreading themselves over the beautiful hill upon which the town is situate.

In this disposition, so pleasing to contemplate, which has been made of the means which our honest industry, and a laudable enterprise have placed at our disposal, I believe no one will undertake to say that a fair proportion has not been devoted to the gratification of a taste for the beautiful in village architecture and its accessories, the comfortable walk, the over-shadowing tree, the green enclosure, and the blooming flower garden. We cannot be said to be deficient in that love of the beautiful in nature, and art, so strikingly apparent in most of our New England towns, and which renders them the admiration of the traveller from other lands. The neat and comfortable dwellings of our mechanics, the extensive homes of some of our more wealthy inhabitants, the snug enclosure of the poor man, and the more enlarged and highly ornamental grounds of his richer neighbour, all manifest the presence of a nobler feeling than that which prompts to exertion from the mere love of gain.

Our public edifices are creditable in style and liberality. Of our churches, it may, with much propriety, be remarked that we may not fear to have them examined, or *numbered.* In a kind of architecture, in relation to which it is said, that the New Englanders are transgressors to a proverb, we have been so far successful, that all our places of public worship are respectable ; and to one of them, has been accorded the high praise of standing without a rival in this part of the country. Our Town Hall has called forth the admiration of visiters of taste, and the buildings devoted to the schools, both in number and appearance, give an unequivocal indication that upon the important subject of education the people of New Bedford have been true to the principles of their Pilgrim ancestry.

While the citizens of New Bedford have exhibited their taste, and of some, perhaps, it may be said, their opulence, in their private dwellings, they have not failed to devote a proper regard to the public convenience, comfort, and safety, and the true prosperity and happiness of the inhabitants. It would be difficult to find a community of the same population, where so liberal an outlay in every branch of public expenditure has uniformly been made. No department has been neglected : and when the effort was unsuccessfully made to obtain a vote for a city charter, it was urged as a reason against the change, that no public concernment had been neglected, and consequently no change was called for.

The public buildings, the arrangements for the support and comfort of the poor and the sick, the means of public education, the condition of the streets and highways, and the state of the fire department, manifest unequivocal evidence of a liberal expenditure, and a careful and discreet supervision.

The population of the town is estimated at about sixteen thousand. It has nearly doubled within the last ten years, every year having shown an increase. During this period, including the appropriations of the present year, there has been expended for public purposes about five hundred and twenty thousand dollars, not including above sixty thousand dollars which has been assessed as county taxes—an average of fifty-two thousand dollars a year, with an average of twelve thousand inhabitants. Few communities in this country can exhibit a parallel to this. A view of some of the items of this expenditure may be interesting. There have been expended upon the

Public schools,	$162,000
Public streets and highways,	103,000
Fire department,	37,000
Paupers,	23,000
Public buildings, about	100,000

A comparison of the sum which has been expended upon the public schools, with that, which during the same period of time it has cost to support the paupers, gives a favourable aspect to this statistical evidence of the conditon and character of the inhabitants. It is proper, however, to observe, that this is but about one-half the whole amount which it has cost to maintain the paupers within the limits of the town. All such as have no residence in the state are supported, in part, by the state government, and for the support of the paupers from other towns, payment is made by the towns to which they respectively belong.

The following are the appropriations made at the Annual Town Meeting, in April last:

For paupers,	$2,800
For streets, repaving, paving, curbing, and flagging,	12,400
For lighting the streets,	2,200
For public schools,	21,500
For night-watch,	3,000
For payments on debt,	5,235 43
For fire department,	7,000
For new alms-house,	12,000
For incidental and miscellaneous,	4,800
Making an aggregate of	$70,735 43

To meet this expenditure, and to pay the state tax of $1,510 50, and the county tax of $6,674 96, there has been assessed a tax of seventy-five thousand dollars, *just the amount of the state tax, voted by the last General Court.*

Real estate	$6,132,300
Personal estate,	$9,637,000
The property of the town has been valued by the assessors, at	$15,769,300
The number of taxables, is	4,141
The number of polls, is (males twenty years of age and upwards)	3,784
The number of persons who pay a poll tax only, is.	2,160

One hundred and seventy-five of the taxables are people of colour. Several of them are large tax-payers. There are above one thousand coloured persons residing in the town.

The valuation in the year 1836, was	$11,360,350
For 1844, it was	14,767,000

After making this financial exhibit, it will not be thought necessary to go much into detail as to the condition of the several departments. Liberality of expenditure and a vigilant supervision are evident in every branch of the public affairs of New Bedford. The public schools are, as we have seen, liberally provided for; their condition furnishes unequivocal evidence that the munificent appropriations of the inhabitants are, and have been, expended under the direction of intelligent and devoted committee men.

From the last report of the School Committee, we see that twenty-eight public schools are sustained by the town, and that forty-seven teachers are constantly employed. Of this large number of teachers only four are males.

A new brick school-house, for the accommodation of the public high-school, and one or more schools of a lower grade, have just been completed. It has been built at an expense of above twelve thousand dollars, and is a beautiful and convenient structure. The number of public school-houses are seventeen.

Perhaps, no better evidence of the effective character of the fire department can be given than the fact, that although nearly all the buildings are of wood, the town has never been visited by an extensive conflagration. This department consists of a board of firewardens, twenty in number, from which three engineers are selected, a hook and ladder company, a company for the protection of property, and ten engine companies. For every engine, ten in number, a convenient house has been provided. The whole number of men belonging to the department is five hundred and twenty-five. Ten dollars a year is allowed to the firemen.

The selectmen, in their last annual report, hold the following language in relation to the department:

"The engines and apparatus attached to them, and all the other fire apparatus of the town, are in good order, as are the buildings appropriated to their use, and the reservoirs, distributed over every part of the village, can, it is believed, afford an ample supply of water for any emergency. These gratifying facts, connected with the still more important one, that we have a body of firemen who have not been, and cannot be, surpassed for all those qualities which give vigour and efficiency to the operations of a fire department, and which give calmness and assurance to the inhabitants when alarmed by the cry of fire, are sources of well-founded gratulation, and make valid the claim of our department to an elevated position among similar establishments of our country, and in the estimation of those for whose safety and protection it has been founded and sustained."

For the economical and comfortable support of the poor, no place has ever been found, so perfect as that which places them, under proper surpervision, upon a farm. This mode was adopted many years ago by New Bedford. A farm of about an hundred acres was purchased, the cost of which, with the buildings, which were then erected, was about seven thousand dollars. We have seen the annual outlay. The farm has been increasing in value, and is now computed to be worth ten thousand dollars. A new alms-house is now in process of erection, which will cost about fifteen thousand dollars. A pleasanter and more commanding situation than that occupied by the present building, has been selected, and it will, when completed, not only be a safe and comfortable dwelling for the poor, but an ornament to the town, by whose enlightened liberality it will have been erected.

In their care for the living, the inhabitants have not been unmindful of what is due to the dead. A public place of burial, called Oak Grove Cemetry, has been provided, containing eight acres of ground. A part of the cemetry is laid out in lots, the exclusive occupancy of which may be obtained from the authorities for a small consideration. The remainder is devoted to indiscriminate burial. It is a beautiful spot. Nature has been lavish of her gifts, and good taste marks the arrangements which have been made by the officers of the town to adapt the grounds to its sacred purpose. "The funds which have been derived from the lots taken by individuals," say the selectmen in the report before quoted, "have enabled the authorities to add to the convenience and beauty of the spot which has been selected as a place for the public interment of the dead, and every citizen, whatever may be his designs or wishes, with regard to himself or his friends, cannot but be gratified that the Common Burying Ground has, by the plan, which has been adopted, been saved from that aspect of loathsomeness and abandonment, too often exhibited in such locations."

The Rural Cemetry, a private ground, is well laid out; and although not possessing the natural advantages of the other, the chaste and beautiful monuments, the neat enclosures, and the green shrubbery, give it a pleasing appearance, and speak of the possession, on the part of those who have availed of it as a place of sepulchre, of those refined and exalted sentiments, which lead to the selection and embellishment of nature's loveliest spots, as a final resting-place for the departed.

In this town the curbing and flagging the side-walks, as well as all the other operations upon the streets, are performed at the public expense. To this it is owing that the sum expended upon the highways has been so large. Between fifty and sixty thousand dollars have been expended upon the side-walks alone. Nearly every one of the streets will, at the close of the present year, have one of its side-walks flagged. Some of the more public thoroughfares are paved and have both the side-walks flagged.

The Town Hall is a magnificent structure. It is built of granite, and is one hundred feet long and sixty-one feet wide, and three stories in height. The lower story, or basement, is occupied as a public market. This room is spacious and convenient, and its stalls in good order, and all furnished with marble benches for the meats; and for the most part supplied with an abundance of those articles usually found in the public market.

The second story is a hall for public meetings, eighty by sixty feet.

In the third story are rooms for the accommodation of the officers of the town. Connected with the office of the Town Clerk, is a large fireproof apartment, in which the records and papers of the town are deposited.

In the hall is suspended a full length portrait of Washington, painted by William A. Hall, a native artist, from Stuart's celebrated picture, and presented to the town by a small number of the citizens. It has been pronounced, by competent judges, to be well and faithfully executed; and while it reflects credit upon the artist, and upon the public spirit of the individuals who caused it to be executed, it is highly ornamental to the beautiful hall.

The edifice, which with the land beneath and around it, cost the town the sum of sixty thousand dollars, has been called by many, the handsomest building in New England devoted to civic purposes.

Having glanced at the principal subjects connected with the town of a public or municipal character, let us for a moment look at what there is worthy of attention in the pursuits of its inhabitants, and the results which have attended the exertions of individuals and corporate bodies.

We have already spoken of that pursuit which forms the principal business of the town. A few details are wanting to give a complete idea of its extent, character, and results.

The number of vessels belonging to the town, engaged in the whaling business, is *two hundred and fifty-one*. They are all ships but five. Collectively they measure *eighty-two thousand one hundred and sixty-two tons*.

These ships are navigated and their operations carried on by crews numbering, on an average, not far from thirty men each. This makes the number on board the fleet above seven thousand, as has already been stated.

These vessels, averaging them, have cost the owners more than thirty thousand dollars each. This of course includes the cost of the outfit. At this low estimate, then, the value of the New Bedford whaling fleet is *seven millions five hundred aud thirty thousand dollars.*

Add to this the value of the wharves, and oil, and candle factories, and the coopering, blacksmithing, boat building, warehouses, and other mechanical establishments directly connected with, and dependent upon, the whaling operations, and we shall find that the amount of capital engaged in the business of *catching* oil from this town alone, will vary but little from *nine millions of dollars.*

During the year 1844, there was brought into the port by the New Bedford fleet—

Sperm Oil,	54,509
Whale Oil,	102,992
Making an aggregate of	157,501 barrels,

or four million, nine hundred and sixty one thousand two hundred and eighty-one and a half gallons. During the same time, nine hundred and seventy-eight thousand five hundred and ninety-two pounds of whalebone were imported. The value of the importation is ascertained as follows:

1,717,033½	galls. Sperm Oil,	at 90 cents,	$1,545,330 15
3,244,248	" Whale Oil,	" 75 cents,	1,175,486 80
978,592	pounds whalebone,	" 35 cents,	342,507 20
Total value of the product of the fishing for the year 1844,			$3,063,324 15

More than three millions of dollars. About one third of this amount is paid to the crews of the ships.

Up to the 25th day of July, of the present year, the importations have been

Sperm Oil,	35,461
Whale Oil,	68,101
	103,562 barrels,

and about seven hundred thousand pounds of whalebone. At the same prices the value of the receipts this year up to the above named date is $2,001,235 27 1-2, more than two million of dollars.

In the year 1843 the results of the fishery were as follows:

Whole number of barrels of oil,

Sperm Oil,	61,066
Whale Oil,	40,922
	101,988 barrels.

This importation, with the whalebone which was brought in the same year, about 360,000 pounds, was estimated to have been worth two millions three hundred thousand dollars.

On the first day of January, 1844, the number of ships in the fishery was two hundred and nineteen, measuring 6973 tons. The number is now two hundred and fifty one, measuring 82,162 tons, shewing an increase in about a year and a half of thirty two ships, and in the tonnage 12,459 tons; about 15 per cent. in the number of vessels and 18 per cent. in the amount of tonnage.

The district of New Bedford includes the towns of Dartmouth, New Bedford, Fairhaven, and Rochester.

There are belonging to the district, one hundred and seventeen thousand five hundred and sixty-nine tons of shipping.

This shows it to rank as the fourth tonnage district in the United States: New York, Boston, and New Orleans exceeding it. New Bedford alone has more than double the amount of registered tonnage owned in Philadelphia.

In the district the registered tonnage is	108,640 tons.
Enrolled tonnage is	8,929 tons.
	117,569 tons.

In the year 1835, August 1st, the tonnage of the district was but 73,982 tons.

On the first day of January, of the present year, there were employed in the whale fishery, from the United States, 643 ships, 35 brigs, and 17 schooners and sloops. The tonnage was 218,655 tons. Since that time there has been a considerable increase. The number of vessels now engaged in the business is about 720.

The manufacture of the products of the fishery forms one important part of the business of the town. Much of the sperm oil imported is prepared for use by the different processes by which *spring*, *summer*, *fall*, and *winter* oil, (as the different kinds are called, according to the season when the oil is pressed,) are produced, before it finds its way to the various markets of the country: and from the spermaceti, an article exclusively the product of the spermaceti whale, is manufactured the spermaceti candle, so universally admired and esteemed for its pleasant light. There are about twenty oil and candle manufactories in the town, most of which are in operation. A large amount of capital is invested in this branch of business, and several hundred persons find regular and healthful employment in connexion with it. A large proportion of the *right* whale, or, as it is generally called, whale or black oil, is exported to the north of Europe. The manufacture for the purification of this kind of oil is carried on to some extent in the town, and more extensively in the country; the high price of sperm oil causing it to be much used in lamps as a substitute for the purer and dearer article.

Much of the sperm oil is consumed in the various manufactories of this country and England. It is thought, by some, that the time is not far distant when the whole importation of this article will be required for the purposes of oiling machinery. Nothing has yet been found which can be used as a substitute for pure sperm oil upon delicate machinery.

It will be readily seen that the prosecution of the business in which New Bedford is engaged, must necessarily give employment to a large amount of labour not immediately connected with the operations of procuring the oil.

Many of the ships belonging to the town have been built there, and no better ships float the ocean, than those which have been launched from the ship yards of New Bedford and the neighbouring town of Fairhaven. The business of repairing the ships, gives employment to a large number of shipwrights, and before any thing is done towards placing on board the whaler the outfit for her voyage, calkers, riggers, sail-makers, and painters find a demand for the exercise of their respective crafts.

But our space will not allow us to enter into the details of the operation of fitting out a whale ship. The amount of from two to five thousand barrels or casks are required for each vessel, and while Michigan supplies the staves, and Fall River, Wareham, and Taunton furnish the hoops, New Bedford mechanics supply the labour which puts the raw material into a shape to fit it for the use of the whaler. The thousand whale boats which are now hanging upon the cranes of the gallant ships, or which are driven forward by their hardy crews, in pursuit of the ocean monsters, are all the product of the New Bedford workshop.

The irons which fasten the whaler to his victim, and the lance which gives the death blow and ends the contest, are wrought by the skill and industry of New Bedford artisans.

Largely have the mechanics and labourers of this thriving town shared in the benefits which have crowned the whaling enterprises of the inhabitants. We may be mistaken, but from the observations and inquiries which we have been enabled to make, we have arrived at the conclusion that there is not a town in New England where so large a proportion of the property is held, by what are generally termed the working men, the mechanics and labourers of the place. Take the men on board the ships, who we have seen number over seven thousand, and add to them the men, women, and children who, upon the shore, are engaged in some one of the numerous vocations directly connected with the whaleman's operations, and it will be found, that in the New Bedford whaling business and its various branches, daily employment is given to more than ten thousand persons. Add to these the great numbers who, in various parts of the world, are furnishing the materials which are demanded, and the supplies which are consumed, in the prosecution of the fisheries, and those who find employment in the disposition which is made of the profits of the business, and the aggregate would present astonishing and gratifying evidence of its magnitude and importance.

In connexion with this branch of our subject we would notice the cordage manufactory recently put into operation. The moving force is two steam engines of twenty horse power each. About seventy-five persons are employed, half of whom are females. Not far from four hundred tons of cordage are annually manufactured.

Our remarks in relation to the business of the place, have thus far, been confined to those pursuits directly appertaining to that branch of industry in which the inhabitants are so generally and so deeply engaged. To give a faithful picture of the industrial aspects of the town, we may add a word in relation to other business operations.

Steam, as a moving power, is fast increasing here. Two planing machines, a manufactory of looking-glasses and picture frames, two mills for grinding grain, several blacksmithing and carpentering establishments, and a manufactory of Prussian blue, from which a beautiful article is turned out, are to a greater or less extent in operation through the instrumentality of the steam engine. An extensive establishment for the manufacture of linseed oil, by steam, will go into operation in a few weeks. The business of making paper hangings is carried on. Carriage making, to an annual amount of fifty thousand dollars, employs quite a number of mechanics. The products of their industry are all consumed in the town. The large number of livery stables, and the somewhat unusual number of individuals who keep their own carriages, make this branch of business extensive and profitable.

The New Bedford Marine Railway and Wharf Company have a capital of fifty thousand dollars, and on a small island owned by them, separated from the busiest part of the town by a narrow channel, and connected with it by a portion of the bridge, one mile in length, which unites New Bedford with the opposite town of Fairhaven, they have, beside wharves, warehouses, dwelling-houses, and mechanics' shops, a marine railway, which affords great facilities for cleaning and repairing the smaller class of vessels. The two individuals who compose that company are extensively engaged in dredging operations in various parts of the country, as well as in their own town. They have machines in operation, several of them moved by steam power, in Canada, and in four different States of the Union.

The New Bedford Institution for Savings, holds funds to the amount of four hundred and twelve thousand dollars. The number of depositors is nineteen hundred and forty.

Thre are four banks, the united capitals of which amount to thirteen hundred thousand dollars. These corporations severally own the buildings in which they are kept. That occupied by the Merchants' and Mechanics' Banks, is a fine structure of brick, with a front of hewn granite from the Fall River quarry. The pillars and other ornamental work of the Town Hall are of the same material. This granite has been thought, by some, to be superior to that procured at Quincy.

There are now but two insurance offices in the town, both conducted on the mutual principle. Four stock offices are now winding up their affairs. One of these, the Merchants', presents an example of successful operation seldom exhibited. In September next, it will be twenty years since it commenced business. Funds for a dividend at that time are now on hand. The Company will then have paid out to its stock holders, upon a capital of one hundred thousand dollars, *three hundred and eighty thousand dollars*, or nineteen per cent. per annum, and have its whole capital and a small surplus remaining. It now has but few risks out, all of which are re-insured.

The New Bedford and Taunton Railroad is twenty miles long. It connects the two places whose names the corporation bears, and was constructed at an expense of four hundred thousand dollars. Nearly all the stock is owned in New Bedford, the managers are residents in that town, and so successful has it been in its operations that the stock is now held at twenty-five per cent. advance.

A glance at the benevolent, religious, and educational aspects of the place will finish our sketch of this village of the whalers.

Among the benevolent undertakings of the inhabitants, the first in importance is that which is sustained by the New Bedford Port Society. They have built a church, a small, but neat, wooden edifice, where services are every Sunday performed by a minister, who, in addition to his labours on that day, is expected to devote nearly all his time to the promotion of the temporal and spiritual welfare of the sailor. An evening meeting is held once a week. A registry office is connected with the "bethel," and its pages are often the means of giving, to distant friends and relatives, informatinn of those who wander from their homes and seek employment upon the decks of the whale-ship. This society has a lady's branch, which has established a clothing store, where the sailor is sure to find well made articles of apparel, and which have the additional recommendation of being, for the most part, the work of the wives, widows, and daughters of the seaman.

For an Orphan's Home, a convenient dwelling has been purchased, where the children reside under the care of a matron and school-mistress. This establishment, under the supervision and control of the society of females, by whose energy and benevolence it has been established and sustained, bids fair to be a highly useful institution.

The Bible Society is a branch of the American Institution. Its operations have been, for the most part, confined to the supply of the destitute sailors, and of such as might be found without the Scriptures within the limits of the town. No ship leaves the harbour of New Bedford without a supply of Bibles for all on board.

The Benevolent Society, and the Dorcas Society, in a quiet, unobtrusive way, seek out and relieve the destitute and the suffering. By far the largest part of the benevolent operations of the town are sustained by the efforts of females, and a weekly gathering at the Town Hall, at which the industry and kindness of the New Bedford ladies are exercised for the relief of sickness and privation, presents a sight far more attractive than the crowded drawing-room or festive hall.

The only literary societies, are the New Bedford Social Library Association, and the New Bedford Lyceum, both incorporated institutions. The latter is confined to a provision for a course of lectures during the winter. It has a small amount of funds, the income of which, with the annual payments for tickets, are more than sufficient to compensate the lecturers and provide a room for their accommodation. It has been in operation about seventeen years.

The Library Association is a much older institution. From a small beginning, in the infancy of the town, it has "grown with its growth, and strengthened with its strength," until it has arrived at a position of stability and usefulness highly gratifying to its friends and creditable to the community. Its library contains five thousand four hundred volumes, and every year witnesses an increase. The books are allowed to be taken out by the proprietors, and an annual assessment furnishes the means of adding to the number and of paying the expenses of the institution.

We have already spoken of the public schools. An interesting fact, connected with them, is the establishment of a public library exclusively for their use. By the enlightened liberality of the state and the town governments, a fund has been provided for a school library, which already numbers two thousand volumes. By a judicious decision of the school committee, the means placed at their disposal were concentrated in the establishment of one library, instead of being divided among the different schools, as has been generally the case in the towns of the state; and the committee room in the Town Hall, fitted up for the purpose, makes a neat and convenient place of deposit, and delivery to the children, for whose benefit the books have been purchased.

There is one other library in the town. It belongs to the Friends Academy, and contains two thousand volumes. This academy is an incorporated institution, and, in addition to the use of the books, the pupils have the advantage of a valuable philosophical apparatus. The academy building is delightfully situated on the rising ground in the west part of the town, and in the centre of a large enclosure beautifully set out with ornamental trees. The corporation has a fund which in part supports the institution. The names of the late William Rotch, of this town, and of Samuel Elam, of Newport, are associated with this academy as its early patrons and benefactors. Its pupils are now exclusively females.

The adherents of almost every shade of religious belief are to be found in New Bedford. Twenty-one different houses of public worship exist within its limits. The Methodists, including a society of coloured persons and one of Reformed Methodists, have five, the orthodox Congregationalists have four, the Baptists, Friends, Episcopalians, Unitarians, Universalists, Roman Catholics, and Mormons, have each one, and the Christians, so called, have five. Two of the latter are owned and occupied by societies of coloured persons. Last Sunday, (we write August 6,) it is believed that there were twenty-four different religious gatherings in the town. The Come-outers and Millerites have regular meetings, and there is a small gathering of Friends who harmonize in sentiment with those who are familiarly known as the Hixite portion of that body.

The churches of New Bedford are nearly all built of wood. The Unitarian and one of the Congregational churches are of stone, and the Friends Meeting House is a large edifice of brick. Several of them are costly buildings, and they are generally, neat and kept in good order.

We might extend our notice, as there are several subjects of interest to which we have not alluded; but we have already extended our article far beyond our original intention. Our object has been to exhibit this community in its industrial aspect; to give an example of the growth of a town, and of a large accumulation of capital, by the well-directed enterprise and industry of its inhabitants. Let it be remembered that the wealth which we have seen, as belonging to the people of New Bedford, has been accumulated by its inhabitants. It has not been the result of foreign labour, or the capital of non-residents invested in the business of the place. In this point of view, it presents us with an example of successful enterprise, which has but few parallels in this, or any other country. And those who read our hasty sketch of the town will agree with us in the opinion, that our people have no reason to be ashamed of the disposition they have made of the means which have been placed at their disposal.

RAILROADS.

The use of railroads, as a mode of transporting persons and property, is, comparatively, a modern improvement. Though they have been in use, to any considerable extent, hardly twenty years, yet, in that brief period, the system has been wonderfully extended, both in Europe and in our own country. It is now believed that the time is not far distant, when the abodes, of civilization will be strongly threaded together, by a continuous net-work of railroads between all important points, furnishing a speedy communication with places the most remote, subserving in an eminent degree, the wants of society, extending the kindly and effective influence of knowledge and commerce—encouraging the spirit of peace—fostering the arts, which thrive under its ministry, and cheapening and strengthening our national defences in time of war. A new element has thus been infused into our social and political systems, the effects of which, we can now, but faintly and imperfectly foresee.

Notwithstanding occasional checks have been given to the railroad impulse, it is still progressing and with increased activity.

In the year 1844, one hundred and fifty-one new applications were made to the British Parliament for railroad charters, and there are instances where competition, in England, has been so great that the railroad companies have embarked in undertakings of a rival character, to their own, in order to defeat schemes for new lines, as a matter of self-protection.

A new impetus has evidently been recently given to these works in this country, particularly in the eastern and northern States.

Applications were made to the Legislature of this State, at its last session, for new charters for the following roads:

From Attica to Hornellsville; from Canandaigua to Corning; from the head of Seneca Lake, which is navigable the whole year; from Ogdensburgh on the St. Lawrence, to some point on Lake Champlain; from Oswego to Syracuse; from Troy to Greenbush; from Watertown, on the Black River, to Cape Vincent, on Lake Ontario, and from Watertown to Rome, on the Erie Canal; from the City of New York to Albany; and from New York to the Connecticut State line, in continuation of a road from New Haven to the latter city. All these applications were granted, except the two last, and both of them will probably succeed at the next session of the Legislature. The charters which were granted comprise additional lines of four hundred and fifty miles of road.

Acts were also passed for the relief of several other railroad companies, among which was one in aid of the New York and Erie Company, without which, no progress could have been made in the further construction of that great work, which it is now believed will be speedily constructed. All these applications, doubtless, were made in perfect good faith, and the roads contemplated by their promoters, will probably be made.

It has been urged with considerable force, that these public works, are so inseparably connected with the general interest and prosperity, that the State should assume control over them all, acquire a title to them, pursuant to the provisions in their several charters—reduce the subject to a general system, and place the roads and their operations under public officers, in the same manner that the canals are conducted. The better opinion however is, that the state should in no case, possess a proprietary interest in a species of property like this, or in any other, except that which from its nature or extent, is beyond the reach of individuals. In the hands of companies, composed of men of different parties, no political influence would be likely to prevail, as it would, where the thousand and one officers, are appointed by a political power, and would doubtless be prosecuted, with more care and economy, by those whose private interests are involved in the account of profit and loss. The working of this plan is now being tried in Belgium, under King Leopold. This is the only

European state, which has adopted and accomplished a national system of railroads. Leopold resided many years in England, previous to his accession to royal power, and acquired great confidence in the practicability and importance of this improvement, and immediately on his ascending the throne, in June 1833, he proposed to the Legislative Chambers, a *projet de loi*, which was approved by that body, 1st May, 1834, decreeing the construction of a railroad, at the expense of the government, from Malines to Verriers, with branches to Brussels, Antwerp, and Ostend, a distance of three hundred and ninety-seven metres, or two hundred and forty-six English miles. Three years after, a law was passed for the construction of a line of road, from Ghent to the frontiers of France, and thence to Tournay, and a branch from Braine-le-Comte to Namur, and another branch from the Malines line to St. Frond, making ninety-four miles more, in all three hundred and forty-one miles. These works have necessarily been very expensive. Twenty-five bridges are extended across one river, (Vesdres,) eighteen tunnels are cut in solid rock, and a difference of six hundred and forty feet, in the level of twenty-five miles, is overcome. The average cost, including all items, £16,470 per mile. The yearly charge on the nation, is £244,521—a little over four and a half per cent. while the income is only, £143,777, or about two and seven tenths per cent. on the cost, leaving an annual loss to the government of £100,000.

It should be remarked, however, that the fares on all the Belgian roads are extremely low, being about one penny per mile in the first class of cars, three farthings in the second class, and in the third class, one third of a penny per mile. It is supposed, however, that the increased traffic and travel will soon swell the income so as to save the government from loss.

In 1843, the passengers on the Belgian lines, allowing one passenger to each journey, were equal to three fourths of the whole population; and in England they amounted to seven eighths of the whole population of that country. At the time this system of railroads was commenced, the Belgian Government had constructed in the north east upwards of thirty-five hundred miles of paved roads.

The state of New York, instead of embarking in these undertakings on her own resources, and at her own risk, has wisely delegated her sovereign power, in this respect, to private incorporations created by the Legislature. The results of this policy are a large number of charters to individuals, with corporate powers for a limited period, restricting their fare to the maximum of four cents per mile. This rate of fare is complained of as exorbitant, or unnecessarily high, and during the last winter's session of the Legislature, memorials numerously signed from the western part of the state, were presented, praying the passage of a law, reducing the fares to a maximum of three cents per mile, and the appointment of a Railroad Commissioner, to establish and control the regulations of the different companies, and direct the time and manner in which their cars should be run, with a view to the general accommodation of the traveller.

In support of the application, the memorialists might have cited a strong precedent, in the policy adopted by the British Government, in relation to this subject, which has engaged the attention of Parliament for several years past.

An act was passed by the British Parliament, August 8th, 1844, authorizing the Lords of the Treasury at any time, after twenty-one years, from the incorporation of *any new company*, to reduce the scale of tolls of any such company, provided the divisible profits, shall exceed ten per cent, on an average for the last three years, guaranteeing to the company, at least ten per cent profits. The fare thus fixed to remain twenty-one years. They are also authorized to purchase the road and its properties, after twenty one years, on paying a sum equal to twenty-five years divisible profits, to be estimated in like manner. The act also requires the new companies, to carry passengers in the third class of cars, for a penny per mile, with fifty pounds of luggage, and exempts *these* trains from taxes. All the regulations adopted by the companies, must have the sanction of the Lords of the committee of the Privy Council for trade and plantations, to give them force. The basis of this act was founded on the report of a committee of the House of Commons, and the subject was doubtless well considered, but whether this govermental interference, with the domestic administration of the affairs of private companies, will result in evil or in good, its operation must hereafter show. The applications to our Legislature above mentioned, were referred to the committee on Railroads, and after a full and labourious examination of the subject, in all its bearings, they came to the conclusion, that the prayer of the memorialists ought not to be granted. The reasoning of the committee is believed to be sound and will bear examination. They considered the good faith of the State as pledged to maintain, and preserve inviolate, the privileges conferred by the grant, or by fair application conveyed to the stockholders. That these charters should be considered as inducements, held out by the State, to individuals to invest their money in the construction of these works, which are deemed to be of public utility and importance.

The right to receive tolls and manage their own affairs in a reasonable manner, was, doubtless, expected by those who subscribed for these stocks and risked their money in the adventure. They are in the nature of contracts, between the State and the shareholders, and should be observed in good faith, by the sovreign contractor. To prevent these corporations from becoming too powerful, or too wealthy, in any possible result, the Legislature reserved a power over them, and by paying a certain per cent. of profits over the cost to take the property from them and assume the control and ownership herself.

Now is it not in effect saying, to them that for the hazard you incur in the failure of this experiment, you will be permitted to charge the fare prescribed in your charter, as long as your profits do not exceed the per cent. which the State must pay, in appropriating the roads. The shareholders contend, and perhaps with some reason, that the Legislature by these provisions, having adopted a particular mode of providing against an excess of income, that such mode should be exclusive. To sustain and foster this improvement, to the importance of which, the whole world bears witness, the State should adopt, a sound and liberal principle of Legislation, and when adopted, adhere to it firmly.

No accidental or transcient circumstances should justify a change. Capitalists will be slow to embark in the execution of these works, if their chartered rights and privileges are to be subject to the caprice of an annual Legislature.

No accidental or transient circumstance should justify a change. Capitalists will be slow to embark in the execution of these works, if their chartered rights and privileges are to be subject to the caprice of an annual legislature.

This great State occupies too lofty a position, and entertains too just a sense of her fair fame and imperial character, to repudiate any of the obligations, properly inferrible from legislative enactments, in which her citizens, and the citizens of other States, have placed unwavering confidence.

What principle would the Legislature assume in regulating the fare? To establish a tariff of discriminating charges, upon any rule of equity, would be impracticable. To fix one rate, and reduce them all to a procrustean level, would be manifestly unjust, as the cost of their construction varies so widely.

While the Mohawk and Hudson, the pioneer road, built, as was then supposed necessary, on a straight line, with stationary engines, including subsequent expenditures, cost nearly $100,000 per mile, the Attica and Buffalo Road, running as it were on a natural grade, a large part of the distance, cost less than $11,000 per mile. The following table may be usefully referred to in this connexion:

Abstract from the Reports made by several Railroad Companies to the Legislature, of the business of the years 1843 *and* 1844.

NAME OF COMPANY.	Length of road.	Cost per mile.	Expenditures in 1843.	Passage fare received.	Passengers through, and way made equal to through.	Required per mile of each passenger to pay expenses, and 7 per cent. on cost.	Average receipts of each passenger per mile.	Net per cent. required on cost at 3 cents per mile per passenger.
1843.		$	$	$	$	$	$	Cents.
Attica and Buffalo, ...	31	8,654 03	19,149	42,837	64,308	1 90	2 15	15
Tonawanda, ...	43	13,953 49	48,606	59,663	71,578	2 94	1 94	07⅛
Auburn and Rochester,....	78	22,145 65	100,201	170,412	74,397	3 81	2 92	04¼
Auburn and Syracuse, ...	26	29,271 46	38,531	67,651	78,000	4 52	3 33	03
Syracuse and Utica,.......	53	20,381 49	66,796	147,353	98,235	2 73	2 82	08¼
Utica and Schenectady, ...	78	27,230 93	128,850	227,163	115,783	3 07	3 06	06⅞
1844.								
Attica and Buffalo, ...	31	10,845 52	25,215	64,339	168,798	2 28	3 00	11⅛
Tonawanda, ...	43	16,914 70	38,312	92,639	66,635	3 04	3 16	07
Auburn and Rochester,....	78	23,030 02	85,660	215,247	77,985	3 45	3 53	05¼
Auburn and Syracuse,.....	26	28,715 58	44,193	80,553	83,553	4 44	3 71	03
Syracuse and Utica,.......	53	21,054 66	71,069	181,646	95,194	2 96	3 60	07
Utica and Schenectady, ...	78	27,803 40	132,838	306,278	22.519	2 98	3 20	07

NOTE.—These estimates include low price, as well as first class passengers.

The Auburn and Rochester Railroad Company was incorporated in 1836, with the privilege of charging three cents per mile only for passengers. The subscription could not be filled, and the stock was not taken. In the following year the charter was amended, allowing them to charge four cents, and under this provision, the stock was subscribed, and the road constructed. The Auburn and Syracuse Road, was allowed to take four cents per mile; the expense of its construction being much greater than was estimated, the Legislature, by an act, passed in 1839, allowed the Company, for a time, to charge five cents per mile for passengers. But if the right of the Legislature to interfere should be conceded, does sound policy, *at this time*, call for its exercise? It would seem not. About eight millions of dollars have been invested in railways between Albany and Attica, divided among a large number of persons, who will be affected by such a measure. All these railways are wooden structures, with a plate rail, which will soon require to be relaid, and with the ⌶ or T rail, which is now found not only to be necessary to afford the requisite speed, but is most economical. The wooden rails rarely last more than seven or eight years, are attended with great and constant danger to the traveller, and will, probably, soon go out of use. Considerations of common justice, therefore, should forbid interference with the receipts of the companies, before they are established on a permanent footing, and have placed their ways in the best possible condition for permanent use.

The energies of competition among our countrymen, are known to pervade to such an extent, every business and adventure, where human industry and enterprise are called into action, as must afford ample security that no association of individuals will be able to monopolise extravagant profits, for any length of time, though they may be armed with the shield of a legislative charter.

The canal packets and freight boats between Schenectady and Buffalo, are actively and successfully competing with the swift steeds of fire, and dividing with them a large portion of the travel, notwithstanding the low fare of the inferior classes of cars. Lake Ontario furnishes another competing line of conveyance, for about half the distance. Under such a state of facts, there is little reason to believe that the companies will find it expedient to drive passengers from their roads on to rival routes.

There is a point in the quantum of compensation, on all these thoroughfares, at which the interest of the carriers and passengers meet.

Experience, and experience alone, will indicate that point, to those who have the matter in charge, and there it may be safely rested.

There is no doubt but low fares will, ere long, be adopted on all our railroads, by the unforced action of the companies themselves.

The experiment made by the Leeds and Selby Railroad Company in 1839, illustrates the correctness of such policy. In the six months from May to November, 1839, their fare, passengers, and receipts, were as follows:

	Fare.	Passengers carried.	Amount received.
1836,	4s. and 3s.	60,439	£8,940
1837,	5s. and 4s.	41,830	7,650
1838,	4s. and 3s.	60,174	7,862

The appointment of a commissioner, with supervisory power over the regulations of the roads, is deemed unnecessary, would be promotive of difficulties, and no substantial good. The directors residing along the line must be able to learn the popular wants, and their own interests will prompt such a routine of arrangements, as will most effectually subserve the requirements of both.

The railroads finished in this State, and over which cars are now daily running, present a line of six hundred and eighty-two miles, at a cost of $20,726,931 20. Those commenced and being constructed, including the unfinished part of the New York and Erie, will extend the line four hundred and twenty miles further, at an estimated cost of $10,104,000.

In the United States the finished roads constitute a line of about five thousand miles, at a cost of not less than $62,000,000.

France is nowise in rear of the railroad movement. She is rapidly pushing out roads, in every direction from her capital, and connecting her principal towns. The roads are graded by the government, finished and put in motion by individual shareholders, and the earnings divided between them and the government, according to a stipulated proportion.

The Emperor of Russia has also embarked in this improvement with great energy. There is a road from St. Petersburgh to Moscow, a distance of four hundred miles, and it is worthy of remark that his principal engineers and machinists are all Americans. There will soon be knitted together, the rivers and the valleys, the mountains and the plains, the oceans and the seas of this mighty empire, that knows not the goal of her own boundaries.

But in this generous race of nations, Great Britain outstrips them all. She has now in operation one thousand seven hundred and thirty and a half miles of road, at a cost of £60,665,946, in addition to which upwards of twenty hundred miles have been provided for during the present session of Parliament. A railroad map of the kingdom has been recently published, on which the roads chartered are indicated by black lines, and those contemplated by red lines, exhibiting the whole surface of the country, all densely covered over with an irregular, intertwined, warp and woof of railroads, in every possible direction, involving in their cost, uncounted millions.

Nor is this movement confined to Europe and America. Two companies are already formed, and provisionally registered, in England, with immense capitals; the court of directors have appointed a surveyor, with a salary of £4000, and £1000 outfit &c., to examine the country, and it is reasonable to believe, that the time is near when the shrill cry of the steam whistle will disturb the luxurious ease and dreamy slumbers of the Brahmins, on the banks of the sacred Ganges.

That this revolution in the medium of social intercourse, and the business and commerce of mankind, should have been accomplished in so short a space of time, and carried to such an extent of perfection, is marvellous indeed, and indicates, yet more clearly, the great truth, that "onward!" is the law of our being, and that there is no assignable limit to the reachings and inventions of the mighty mind. Revelation tells us, that "man was created in the image of God," and we have a right to believe, that his intellect also, was fashioned in likeness of the same Divine Prototype, the same Great Original.

The currents of moral sentiment, and popular feeling—the interest and policy of nations—the whole tendency of human affairs, now strongly incline to peace, and offer a more favorable period for the progress of universal improvement, than has ever before existed in the history of the world; and at the end of another century, which individuals now in life may live to witness, it is probable that our children's children will look back to the condition of things, at this our own enlightened age, as we are wont to call it, with the same consciousness of superior advancement, in every art, in every science, and in the whole range of the efforts of men, with which we now survey the point at which our predecessors stood, "in their pride of place," one hundred years ago.

The great Bacon scouted the idea of the earth revolving around the sun, and Gallileo was imprisoned for the heresy of maintaining it.

The Magnetic Telegraph has already annihilated distance in the transmission of intelligence by signs, and perhaps he could not be charged as visionary, who should insist, that we are not very far from the time when some invention will be made for the conveyance of sound, that will enable us to hold daily converse with the monarch of England, the autocrat of Russia, and the chief of the Celestial Empire.

AMERICAN FACTORIES.

We promised in our last number to give some extracts from the "Lowell Offering," with which publication our readers have been already made acquainted, through the disinterested testimony of the Rev. Dr. Scoresby, Mr. Dickens, Mr. Knight, and the celebrated Miss Martineau.

We would not, if we could, conceal the pride and gratification we derive from presenting these extracts, although they have been already published at Lowell, in the periodical itself, and also in England.

Our publication in its circulation through the interior, will at once reach Kentucky, Ohio, Tennessee, North and South Carolina, Louisiana, Illinois, and Indiana, to say nothing of the middle and eastern States; and will fall into many hands that would, probably, otherwise never have the opportunity of knowing the vast difference which exists between factory life in this country and in Europe.

The truth is, that there is a great difference in the lives of all who labour in this blessed land, and those similarly situated on the eastern side of the Atlantic, which is not, and we very much doubt if it ever can be, understood, by those who are not natives of our free soil.

There is a feeling about human rights and human character here, that really obtains no where else. There is none of that subserviency among us, that is felt by what are called "the operatives" in Europe.

We mean not to draw invidious comparisons, but simply to state facts. A competent knowledge of what are called the different classes of society in Europe, from a residence there of some years, enables us to speak advisedly on this subject, and we have no hesitation in stating it as our opinion, that the different "casts" in India do not form more complete barriers to a general intercourse there, than do the classifications of society under the remnants of feudalism in Europe. There is none of that ambition to better their condition among the "operatives" (we exceedingly dislike the term) in the old world, that there is among our working classes in America.

This it is, that sustains the man who labours, with us—he is constantly looking forward to a better condition. This, in many instances, prompts to study and the acquisition of knowledge.*

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* Since writing the foregoing we have read the interesting travels of Charles Lyell, Esq., F. R. S., generally known in this country as Dr. Lyell, the geologist, in which we find the following remarks, which so fully corroborate our ideas on the ambition

Not so in Europe—there, the man who is born with labour as his only inheritance, never thinks of rising above a life of toil, and remains in ignorance; all motives to mental improvement are absent; he never thinks of any thing but how he *is to keep from want.* We have often heard this subserviency boasted of by foreigners.

Now, although doubtless the ambition to rise, may be carried to too great an extent, yet we hope never to see it suppressed in this country.

It is this ambition which has prompted the girls of Lowell to improve themselves. Miss Martineau speaks of Mr. Emmerson's lecturing to them in their Lyceum—does not this offer a strong proof of their desire to acquire knowledge?

We are, and always have been, the advocates of protection to our home industry, from this very feeling; because the shutting out of degraded labour from free admission here, cannot fail to raise the deserving and industrious, and produce a higher state of comfort among the larger proportion of our working population. Moreover, the introduction of the arts gives a greater scope to the intellect, and is undoubtedly promotive of human happiness.

We have heard this often assented to by the advocates of "Free Trade." But, say they, the arts and manufactures will come in their natural course, when we can work as *cheap* as they do in Europe. Now

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of our people to better their condition, that we cannot omit to insert it. It is as follows, viz.:

"We have now seen the two largest cities, many towns and villages, besides some of the back settlements of New York and the New England States; an exemplification, I am told, of a population amounting to about five millions of souls.

"We have met with no beggars, witnessed no signs of want, but every where the most unequivocal proofs of prosperity and rapid progress in agriculture, commerce, and great public works. As these States are some of them, entirely free from debt, and the rest have punctually paid the interest of government loans, it would be most unjust to apply to them the disparaging comment 'that it is easy to go ahead with borrowed money.' In spite of the constant influx of uneducated and pennyless adventurers from Europe, I believe it would be impossible to find five millions in any other region of the globe, whose average moral, social, and intellectual condition stands so high. One convincing evidence of their well-being has not, I think, been sufficiently dwelt upon by foreigners. I allude to the difficulty of obtaining and retaining young American men and women for a series of years in domestic service, an occupation by no means considered as degrading here, for they are highly paid, and treated almost as equals. But so long as they enjoy such facilities for bettering their condition, and can marry early, they naturally renounce this bondage as soon as possible. That the few, or the opulent class, especially those resident in country places, should be put to great inconvenience by this circumstance, is unavoidable, and we must therefore be put upon our guard, when endeavoring to estimate the happiness of the many, not to sympathise too much with this minority.

"I am also aware that the blessing alluded to, and many others which they enjoy, belong to a *progressive*, as contrasted with a *stationary* state of society; that they characterise the new colony, where there is abundance of unoccupied land, and a ready outlet to a redundant labouring class. They are not the results of a monarchical or aristocratic constitution, nor the fruits of an absolute equality of religious sects—still less of universal suffrage.

"Nevertheless, we must not forget how easily all the geographical advantages arising from climate, soil, fine navigable rivers, splendid harbours, and a wilderness in the far west, might have been marred by other laws and other political institutions. Had Spain colonized this region, how different would have been her career of civilization! Had the Puritan fathers landed on the banks of the Plata, how many hundreds of large steamers would ere this have been plying the Parana and Uraguay—how many rail trains flying over the Pampas, how many large schools and universities flourishing in Paraguay!"

this "cheap working" is what we hope never again to see in this land, which ought to prove a home of comfort and happiness to the working classes, or the blood that was spilt and the treasure that was expended, to found our matchless institutions, were spilt, and expended in vain.

We had a full experience of *cheap labour* from the years 1816 to 1824, and since that time, whenever the country has been inundated with foreign manufactures.

What cheapens labour, *cheapens man in the scale of creation*. We put the moneyed price out of the question; *price* is extremely uncertain; it varies, with the contraction or expansion of the currency, with speculations; and is constantly fluctuating, as production outruns, or falls short of consumption, no matter whether the short supply or redundancy of an article be of foreign or domestic origin—with this difference, however, that our whole industry cannot be clogged from the latter cause, as it often is from the former. Hence a much better standard than *price*, is the proportion of the material produced, and of the necessaries of life, which the labourer can obtain for his daily or weekly toil. And we unhesitatingly assert the fact, without fear of its being controverted, that the working people of this country obtain a much larger share, when their labour is duly protected, for the self-evident reason, that when our home market is given up to foreigners, who work for next to nothing, the whole industry of the country is paralyzed, and there is little employment in any branch of it.

It is the height of folly to say that we either ought to, or can manufacture as *cheap*, in this sense of the term, as they do in Europe. Under a free trade system, we shall have no market for our productions, and it is of little consequence at what *price* commodities can be obtained by the labourer when he cannot sell his labour at any price.

But we are wandering further than we intended from the immediate object before us, and shall now return to it, and give the articles from the "Lowell Offering" which we proposed to insert—with an earnest prayer, that those who penned them, and all those throughout the length and breadth of our blessed land, who earn their bread by their daily toil, may always have such a remuneration as may enable them to partake of their full share; not only of the physical comforts of this life, but of that moral and religious elevation of character, which, while it will greatly increase their happiness here, will the better fit them for the life to come, where all distinctions but those of intelligence and virtue will be done away.

We purposely insert two articles to which Mr. Knight alludes in his publication of "mind among the spindles," namely, "The Lock of Gray Hair," and the lines at the "Tomb of Washington;" and in so doing, cannot withhold our entire coincidence in the opinion expressed by Mr. Dickens, as recorded by Mr. Knight, that "putting entirely out of sight the fact of the articles having been written by these girls after the arduous labours of the day, they will compare advantageously with a great many English Annuals." Can Agriculture, with all its admitted value, or Commerce, with its well earned pride, give us such a specimen of intellect as we here show them from among the spindles?

THE LOCK OF GRAY HAIR.

"TOUCHING and simple memento of departed worth and affection! how mournfully sweet are the recollections thou awakenest in the heart, as I gaze upon thee—shorn after death had stamped her loved features with the changeless hue of the grave. How vividly memory recalls the time when, in childish sportiveness and affection, I arranged this little tress upon the venerable forehead of my grandmother! Though Time had left his impress there, a majestic beauty yet rested upon thy brow; for age had no power to quench the light of benevolence that beamed from thine eye, nor wither the smile of goodness that animated thy features. Again do I seem to listen to the mild voice, whose accents had ever power to subdue the waywardness of my spirit, and to hush to calmness the wild and turbulent passions of my nature. Though ten summers have made the grass green upon thy grave, and the white rose burst in beauty above thine honoured head, thy name is yet green in our memory, and thy virtues have left a deathless fragrance in the hearts of thy children.

"Though she of whom I tell claimed not kindred with the 'high-born of earth'—though the proud descent of titled ancestry marked not her name—yet the purity of her spotless character, the practical usefulness of her life, her firm adherence to duty, her high and holy submission to the will of Heaven, in every conflict, shed a radiance more resplendent than the glittering coronet's hues, more enduring than the wreath that encircles the head of genius. It was no lordly dome of other climes, nor yet of our far-off sunny south, that called her mistress; but among the granite hills of New Hampshire, my own father-land, was her humble home.

"Well do I remember the morning when she related to me, a sportive girl of thirteen, the events of her early days. At her request, I was her companion during her accustomed morning walk about her own homestead. During our ramble, she suddenly stopped, and looked intently down upon the green earth, leaving me in silent wonder at what could so strongly rivet her attention. At length she raised her eyes, and pointing to an ancient hollow in the earth, nearly concealed by rank herbage, she said, 'that spot is the dearest to me on earth.' I looked around, then into her face for an explanation, seeing nothing unusually attractive about the place. But ah! how many cherished memories came up at that moment! The tear of fond recollection stood in her eye as she spoke:—'On this spot I passed the brightest hours of my existence.' To my eager inquiry, 'Did you not always live in the large white house yonder?' She replied, 'No, my child. Fifty years ago, upon this spot stood a rude dwelling, composed of logs. Here I passed the early days of my marriage, and here my noble first-born drew his first breath.' In answer to my earnest entreaty to tell me all about it, she seated herself upon the large broad stone which had been her ancient hearth, and commenced her story.

"'It was a bright midsummer eve when your grandfather, whom you never saw, brought me here, his chosen and happy bride. On that morning had we plighted our faith at the altar—that morning, with all the feeling natural to a girl of eighteen, I bade adieu to the home of my childhood, and with a fond mother's last kiss yet warm upon my cheek, commenced my journey with my husband towards his new home in the wilderness. Slowly on horseback we proceeded on our way, through the green forest path, whose deep winding course was directed by incisions upon the trees left by the axe of the sturdy woodsman. Yet no modern bride in her splendid coach, decked in satin, orange-flowers, and lace—on the way to her stately city mansion, ever felt her heart beat higher than did my own on that day. For as I looked upon the manly form of him beside me, as with careful hand he guided my bridal rein—or met the fond glance of his full dark eye, I felt that his was a changeless love.

"'Thus we pursued our lonely way through the lengthening forest, where Nature reigned almost in her primitive wildness and beauty. Now and then a cultivated patch, with a newly-erected cottage, where sat the young mother, hushing with her low wild song the babe upon her bosom, with the crash of the distant falling trees, proclaimed it the home of the emigrant.

"'Twilight had thrown her soft shade over the earth: the bending foliage assumed a deeper hue; the wild wood bird singing her last note, as we emerged from the forest to a spot termed by the early settlers 'a clearing.' It was an enclosure of a few acres, where the preceding year had stood in its pride the stately forest-tree. In the centre, surrounded by tall stalks of Indian corn, waving their silken tassels in the night-breeze, stood the lowly cot which was to be my future home. Beneath yon aged oak, which has been spared to tell of the past, we dismounted from our horses, and entered our rude dwelling. All was silent within and without, save the low whisper of the wind as it swept through the forest. But blessed with youth, health, love, and hope, what had we to fear? Not that the privations and hardships incident to the early emigrant were unknown to us—but we heeded them not.

"'The early dawn, and dewy eve, saw us unremitting in our toil, and Heaven crowned our labours with blessings. 'The wilderness began to blossom as the rose,' and our barns were filled with plenty.

"'But there was coming a time big with the fate of these then infant colonies. The murmur of discontent, long since heard in our large commercial ports, grew longer and louder, beneath repeated acts of British oppression. We knew the portentous cloud every day grew darker. In those days our means of intelligence were limited to the casual visitation of some traveller from abroad, to our wilderness.

"'But uncertain and doubtful as was its nature, it was enough to rouse the spirit of patriotism in many a manly heart; and while the note of preparation loudly rang in the bustling thoroughfares, its tones were not unheard among these granite rocks. The trusty firelock was remounted, and hung in polished readiness over each humble door. The shining pewter was transformed to the heavy bullet, awaiting the first signal to carry death to the oppressor.

"'It was on the memorable 17th of June, 1775, that your grandfather was at his usual labour in a distant part of his farm: suddenly there fell upon his ear a sound heavier than the crash of the falling tree: echo answered echo along these hills; he knew the hour had come—that the flame had burst forth which blood alone could extinguish. His was not a spirit to slumber within sound of that battle-peal. He dropped his implements, and returned to his house. Never shall I forget the expression of his face as he entered. There was a wild fire in his eye—his cheek was flushed—the veins upon his broad forehead swelled nigh to bursting. He looked at me—then at his infant boy—and for a moment his face was convulsed. But soon the calm expression of high resolve shone upon his features.

" 'Then I felt that what I had long secretly dreaded, was about to be realized. For awhile the woman struggled fearfully within me—but the strife was brief; and though I could not with my lips say, 'go,' in my heart I responded, 'God's will be done'—for as such I could but regard the sacred cause in which all for which we lived was staked. I dwell not on the anguished parting, nor on the lonely desolation of heart which followed. A few hasty arrangements, and he, in that stern band known as the Green Mountain Boys, led by the noble Stark, hurried to the post of danger. On the plains of Bennington he nobly distinguished himself, in that fierce conflict with the haughty Briton and mercenary foe.

" 'Long and dreary was the period of my husband's absence; but the God of my fathers forsook me not. To Him I committed my absent one, in the confidence that He would do all things well. Now and then, a hurried scrawl written, perhaps, on the eve of an expected battle, came to me in my lonely solitude like the 'dove of peace' and consolation—for it spoke of undying affection and unshaken faith in the utlimate success of that cause for which he had left all.

" 'But he did return. Once more he was with me. I saw him press his first-born to his bosom, and receive the little dark-eyed one, whom he had never yet seen, with new fondness to his paternal arms. He lived to witness the glorious termination of that struggle, the events of which all so well know; to see the 'stars and stripes' waving triumphantly in the breeze, and to enjoy, for a brief season, the rich blessings of peace and independence. But ere the sere and yellow leaf of age was upon his brow, the withering hand of disease laid his noble head in the dust. As the going down of the sun, which foretells a glorious rising, so was his death. Many years have gone by, since he was laid in his quiet resting-place, where, in a few brief days, I shall slumber sweetly by his side.'

" Such was her unvarnished story; and such is substantially the story of many an ancient mother of New England. Yet while the pen of history tells of the noble deeds of the patriot fathers, it records little of the days of privation and toil of the patriot mothers—of their nights of harassing anxiety and uncomplaining sorrow. But their virtues remain written upon the hearts of their daughters, in characters that perish not. Let not the rude hand of degeneracy desecrate the hallowed shrine of their memory. "THERESA."

THE TOMB OF WASHINGTON.

"He sleeps there in midst of the very simplicities of Nature."

THERE let him sleep, in Nature's arms,
  Her well-beloved, her chosen child—
There 'mid the living, quiet charms
  Of that sequestered wild.
  He would have chosen such a spot,
'Twas fit that they should lay him there,
Away from all the haunts of care;
  The world disturbs him not.
He sleeps full sweet in his retreat—
  The place is consecrated ground,
It is not meet unhallowed feet
  Should tread that sacred mound.

He lies in pomp—not of display—
  No useless trappings grace his bier,
Nor idle words—they may not say
  What treasures cluster here.
  The pomp of nature, wild and free,
Adorns our hero's lowly bed,
And gently bends above his head,
  The weeping laurel tree.
In glory's day he shunned display,
  And ye may not bedeck him now,
But Nature may, in her own way,
  Hang garlands round his brow.

He lies in pomp—not sculptured stone,
  Nor chiselled marble—vain pretence—
The glory of his deeds alone
  Is his magnificence.
  His country's love the meed he won,
He bore it with him down to death,
Unsullied e'en by slander's breath—
  His country's sire and son.
Her hopes and fears, her smiles and tears,
  Were each his own. He gave his land,
His earliest cares, his choicest years,
  And led her conquering band.

He lies in pomp—not pomp of war—
  He fought, but fought not for renown;
He triumphed, yet the victor's star
  Adorned no regal crown.
  His honour was his country's weal;
From off her neck the yoke he tore—
It was enough, he asked no more;
  His generous heart could feel
No low desire for king's attire;—
  With brother, friend, and country blest,
He could aspire to honours higher
  Than kingly crown or crest.

He lies in pomp—his burial place
  Than sculptured stone is richer far;
For in the heart's deep love we trace
  His name, a golden star.
  Wherever patriotism breathes,
His memory is devoutly shrined
In every pure and gifted mind:
  And history, with wreaths
Of deathless fame, entwines that name,
  Which evermore, beneath all skies,
Like vestal flame, shall live the same,
  For virtue never dies.

There let him rest—'tis a sweet spot;
  Simplicity becomes the great—
But Vernon's son is not forgot,
  Though sleeping not in state.
  There, wrapt in his own dignity,
His presence makes it hallowed ground,
And Nature throws her charms around,
  And o'er him smiles the sky.
There let him rest—the noblest, best;
  The labours of his life all done—
There let him rest, the spot is blessed—
  The grave of WASHINGTON.

ADELAIDE.

STATE PRISON MONOPOLY.

The excitement which for a long time prevailed in this city, on the subject of State Prison Monopoly, must be fresh in the remembrance of most of our inhabitants. The Editor of this work, at that time, lived in a house in the upper part of the city, the stone steps of which leading to the front door, had been made at the State Prison; and he well recollects a loaded musket having been brought to him, accompanied with a notice that he must defend his house against the anti-State Prison monopolists. All the houses in St. Mark's Place, he was told, had muskets and ammunition furnished them, as an attack was contemplated.

This fact is recorded, solely with a view to show the intense excitement that prevailed, when the evil of degraded labour, interfering with our mechanic industry, was so near home that our mechanics could see its consequences.

The stone and marble, and other articles, which were manufactured by the prisoners at Sing Sing, were sold at prices which paralyzed the arm of honest, independent industry, and produced, to those who laboured in corresponding arts, the most serious embarrassments, from the effect it had to lessen the value of their labour.

Now what, we would ask, is the difference between a State Prison Monopoly from degraded labour at home—and the degraded labour of the monarchical institutions of Europe? If, without a protective tariff, Europeans can bring to New York, hats, boots and shoes, ready made clothing, and all the various productions of the mechanic arts, so as to get entire possession of our markets, and undersell and destroy all similar productions made at home, may not Europe be considered in the light of a great state prison, and a protective tariff as a law to abolish State Prison Monopoly? We put this question in all sincerity to our fellow-citizens of the various mechanical professions, and ask them seriously to examine it for themselves.

Either the Europeans can undersell them, or they cannot. If they *can*, then the same reason that caused the clamour against the State Prison Monopoly exists, with much increased force, against the monopoly which would be given to the degraded labour of Europe, and from which we are protected solely by the existing tariff; and if Europeans could not undersell them, then all arguments against a protective tariff are surely at an end; for it is certainly our duty to sustain our own workmen in preference to the workmen of other countries. We refer our mechanics, also, to the array of facts, which must have come within the knowledge of many of them, but upon which they may not sufficiently have reflected, tending to show that the ground here taken is indisputable: namely, that a tariff solely for revenue, is equivalent to a State Prison Monopoly, and a protective tariff, to the abolition of such monopoly.

ADVANTAGES OF MANUFACTORIES

IN THE CITY OF NEW YORK.

It has been, for some time, our purpose to call the attention of the capitalists of this city to the vast benefits that would result to them, and to the owners of real estate, from the establishment of manufactories on this Island. It possesses advantages which ought to be known, and it would appear to us, if known, and duly weighed and considered, could not fail to wake up a feeling on the subject which must result favourably to the project.

No place in the Union possesses as many facilities as the city of New York for the manufacture of cotton. The raw material is always to be had in great abundance, with the power to select of the best qualities; there are thousands of unemployed females, who would be rejoiced to find employment at moderate wages; favourable sites without number exist in the Twelfth Ward, where every thing could be conveyed to and from a factory by water carriage; building materials of all kinds can be easily and cheaply obtained, and it is now fully ascertained that steam power in large cities is more economical than water power in country villages. The average cost of the water mills in New England, embracing the machinery and utensils of every kind, is ascertained to be, as near as may be, about thirty dollars per spindle; while it is well known, that here, a steam mill could be put in operation at a much less expense. The question no longer admits of a doubt, that the greater advantages of a populous seaport, such as New York, for procuring the raw material, obtaining of hands at more moderate wages, with a constant market on the spot for the goods, without cost of freight, insurance, and other charges, afford in themselves a considerable profit.

We have before us an address delivered recently at Portsmouth, N. H., by a Mr. James, of Newburyport, Mass., on the comparative expenses of steam, and of water power for manufacturing purposes, in which he says:

"It is demonstrable, not only by mathematical calculation, on scientific principles, but from acutual experience, which I am fully prepared to prove, *that in a seaport, or a town contiguous to ship navigation, steam power set in operation under the supervision of practical scientific men, is cheaper, as a motive power, all things taken into the account, than water power in the country can be, for manufacturing purposes.* In other words, the comparative advantages of a location in a seaport, over one in the country, are more than sufficient to counterbalance any excess of cost of steam power over water power.

"The average cost per spindle of the water mills in New England, embracing all the expense necessary for carrying on the manufacture of cotton cloth, is about thirty dollars; or, in other words, a water mill of six thousand spindles with water privilege, and all necessary apparatus for carrying on the manufacture of cotton, will cost at least one hundred and eighty thousand dollars; while a steam cotton mill, erected in this town, on a desirable location, would not exceed in cost, one hundred thousand dollars. Here we have a difference, in favour of the steam mill, of eighty thousand dollars, the annual interest of which is four thousand eight hundred dollars; a sum more than sufficient to purchase fuel for two such mills, to say nothing of the cost of transportation and of the expense of heating the mill six months in the year. This last is an item which is saved by using the steam in the steam mill after it has performed its service in supplying the mill with a motive power. We will suppose for a moment that one half the capital, which has been invested by the citizens of this town in water mills, had been invested in steam mills in this place, say one million of dollars. This would have been sufficient to erect and put into operation a steam cotton mill of at least sixty thousand spindles, thereby giving employment to some two thousand of your own citizens, and annually paying to them at least three hundred thousand dollars for their services. Think you, that three hundred thousand dollars annually distributed among all classes of your citizens, and coming as it does, from a distant part of the country, from the consumer of your manufactures, would not give renewed life and energy to business generally in this place? But to be more particular; the bare cost of transportation saved by this means, in many instances, would pay for the cost of fuel to operate a steam mill. There are many seasons when water mills must lie idle for want of water to run them, when a steam mill in the same period might earn, and I know has earned, sufficient to pay more than the whole cost of fuel for one year. Many other advantages might be named, which go directly to enhance the cost of a water mill, and among them, the following in particular. In the country, when you erect a cotton mill, you must also purchase a large quantity of land, cut streets, construct dams, canals, flumes, raceways, and erect a village. This diverts a large proportion of the capital from the proper object in view; in other words, it renders twice the amount of capital necessary to conduct the same amount of business. In large establishments, especially, this is desirable to be avoided; and in dull times, or when the owners find it necessary to stop their mills, they lose double what they otherwise would, were they manufacturing by steam power.

" In seaports this difficulty does not exist. The company find streets already cut, and buildings already erected for their operations, and persons ready to erect more if necessary. Consequently, some eighty thousand dollars less becomes necessary to commence operations.

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" And again, some cities become rich by means of being the medium through which the wealth of others is exchanged. What is there to prevent this place from creating this wealth for itself and making its own exchanges? Cotton manufactories create an extensive demand for labour; thus they tend to an increase of population. They give employment to coasting vessels and mariners, to import the raw material and export the manufactures. And an increasing population, also, creates an increased and increasing demand for those articles of foreign production, which are numbered either among the necessaries, the comforts, or the luxuries of life. In this way they increase navigation to foreign ports as well as to our own. To supply the numerous wants of those connected with or employed in manufactories, additional mechanics and traders are necessary, and additional numbers in all branches and professions. Added to all this, they raise the value of real estate, by creating an increased demand for it and very much enhance the agricultural interest, by opening a more certain and extensive home market for the productions of the soil. This is no idle speculation; facts sustain the position. And is it not much better for a town with but a limited trade, to enter at once on a business which will produce such beneficial results, than to languish, or remain stationary, with every facility to improve its condition? There can be no mistake about it. Look to the city of Providence—to Newport—to Bristol—to Newburyport; places that are daily building up, and improving their condition, but in which, were it not for their manufactories, the grass would grow in the streets.

"Cotton manufactories must increase the number of the industrious, and they, with good management, must create wealth. The wealth thus created must be exchanged.

"A great proportion of the proceeds will circulate in the community to answer the purposes of life; and the excess will seek new and profitable investments. Thus, it is morally certain, that cotton manufactories will enlarge the population of any town where they may be located, and, in due proportion, add to its commercial prosperity. I have already adverted to the cities of Lowell and Providence; these are examples which, when considered in connexion, are amply sufficient to substantiate all I have said on this subject. The entire population of Lowell has been collected on that spot by means of cotton mills. Had the capital employed there been invested in steam mills in this town, is it not self-evident that the population and trade of Lowell, as they now are, would have been added to this place? Yes, even more than that, for the exchanges now carried on between Lowell, Boston, and other places, would themselves have been confined to Portsmouth, and her advantages and commercial prosperity enlarged accordingly. Providence, by employing the larger portion of her capital in the country, loses the benefits she would reap from having the artisans she pays within her own limits; and the produce of their labour at hand, on her own wharves, to ship directly to any port in the world without the expense of inland transportation.

"These considerations alone, it appears to me, are amply sufficient to show the utility and importance of cotton manufactories to such a place as this. If it be at all desirable to add to its population, its trade, its commerce, and its wealth, it must be desirable, also, to make use of the means to ensure the result; and to a town so situated that it must trust almost entirely to its own energies and its own resources, I know of no means so well calculated to render success certain, as the enterprise I have recommended.

"In regard to the cost of steam as a motive power, compared with that of water, it needs no laboured argument to prove that steam is as cheap, if not cheaper than water. To state the case as simply and directly as possible, we will suppose water power in Portsmouth for sale at four dollars per spindle, the same sum that is charged in Lowell. A mill of ten thousand spindles would require an outlay for water power of say forty thousand dollars; the additional cost of a building erected on the bank of a river, together with raceways, flumes, wheel-pits, &c. &c. fifteen thousand dollars; making an outlay of fifty-five thousand dollars. The interest of this is three thousand three hundred dollars annually. Add to this the cost of heating the water mill, which would be at least one thousand dollars, and we have the sum of four thousand three hundred dollars, with which to purchase fuel for a steam mill of corresponding size.

"One and a half tons of anthracite coal, is all that would be required one day to generate steam sufficient to operate a mill of ten thousand spindles. Allowing the mill to be in operation three hundred and ten days in a year, there would be consumed four hundred and sixty-five tons of coal, which can be purchased and delivered on the wharf, along side of the mill, at four dollars and seventy-five cents per ton—making the sum of two thousand two hundred and eight dollars: add to this the cost of engineer and firemen—say three dollars per day—nine hundred and thirty dollars; and we have three thousand one hundred and thirty-eight dollars as the entire cost of operating the steam mill, while the interest on the outlay for water power, together with the expense of heating, is four thousand three hundred dollars; showing a balance in favour of steam of one thousand one hundred and sixty-two dollars per annum; and this too, supposing the water mill and the steam mill to be side by side.* I have made no mention, in this comparison, of the cost of engine or water wheels; I have set the cost of one against that of the other. The cost of water wheels and shafting sufficient to operate a cotton factory, will be as much, if not more, than a steam engine and shafting suitable for operating the same. There are advantages, however, in favour of steam for cotton manufacturing, which have not been named. Steam is indispensably necessary in manufacturing the finer and better qualities of cotton cloths. When it is understood that the motive power, whether it be steam or water, costs less than three mills per yard, it will readily be perceived, that if, from the use of steam, there is a decided improvement in the character and appearance of the article manufactured over that produced by water power, you reap an advantage in some cases quadruple the entire cost of power. Or in other words, cotton cloths of No. 40 yarns, manufactured by steam, are now selling at from one to two cents per yard more than those of a similar number, manufactured from equal if not superior cotton, by water power. It is true, that mills driven by water power may, and many of them do, profit by the use of steam, both in respect of warming the mills and maintaining a humid atmosphere. But such an arrangement, to be able successfully to compete with a mill driven by steam, must be kept up through the year; which adds the cost of steam to that of water power; and of course, such an arrangement could not long compete with a mill driven by steam power.

"Having said sufficient, perhaps, on the general principles of steam and water power, and the advantages of the former for operating manufactories in this place, I will only add a brief and plain statement of facts, in relation to the Bartlett Steam Mills of Newburyport. To appreciate fully the facts which I am about to state as to the success of these Steam Mills, it is necessary to bear in mind that since the year 1838, when the Bartlett Mill No. 1 went fully into operation, the business we are considering has suffered in general more than at any former period in the history of this country. Cotton cloths, manufactured at the Bartlett Mill No. 1, in 1839, sold readily at 20 cents per yard. The same article has since been sold for 12 cents, showing a difference in the price of 40 per cent. It is true there has been a corresponding decline in the cost of the raw material, but the price of labour has not fallen in a similar degree.

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* It is proper to remark here, that the cost of real estate, or the interest on the same, should be deducted from one thousand one hundred and sixty-two dollars, the amount of balance in favour of steam power—which will reduce that balance some three or four hundred dollars, as the case may be.

"The Bartlett Mill No. 1 was commenced in 1838, and went into operation in March, 1839. It contains 6386 spindles.

"The Mill No. 2 was erected in 1840, and contains about 11,000 spindles; two-thirds of these went into operation in March, 1841, the remainder in February, 1842.

"The real estate, mills, and machinery, dwelling-houses, coal-houses, and counting-house, in fact all the corporate property, cost, in gross, $334,000. These mills manufacture something less than two millions of yards annually, with the consumption of three tons of anthracite coal daily.

"Notwithstanding the extremely unfavourable state of the times, since these mills went into operation, and in spite of every adverse circumstance, the average dividend has been such, that I have no hesitation in referring you to the parties interested for full and satisfactory information on this subject. And in contemplation of the present condition of Portsmouth, and its manifestly favourable location to the successful prosecution of this manufacture, I cannot but hope that the energy and capital of its citizens may be thus employed, and its business thus receive the same impulse, which similar operations have imparted to other towns."

Now there is not one word said, in favour of establishing steam cotton mills at Portsmouth, that will not apply with greater force to this city. We have, of course, a vastly greater population, much better opportunities for the selection and purchase of the raw material, and a decidedly better market at the very door for the proceeds of cotton mills.

Nor would the establishment of such mills here, as it would seem, be difficult, in regard to obtaining capital for the investment, as it would be so very advantageous to the holders of real estate to have mills located in any well-selected neighbourhood, that, doubtless, many could be found who would take an interest in them. Men of capital, also, who are engaged in the domestic commission business, no doubt, could be met with, who would, for the purpose of obtaining the sale of the goods, join in and take a considerable share.

With so many inducements to embark in such enterprises, it does really appear wonderful that they are not undertaken. There need be no doubt as to the accuracy of Mr. James's calculations. Information can be obtained to a mathematical certainty as to the necessary outlay. The thing is no longer a matter of experiment.

We throw out these hints, in the hope that so many advantages will not be suffered long to remain dormant, but that our men of capital and enterprise will avail themselves of means so obvious, to receive a handsome remuneration for the sum invested, while they would, at the same time, be doing an incalculable benefit to this whole community in the additional income which would result from the many idlers who would thus be industriously and usefully employed.

We add a list of the manufactures in the city of New York, as shown by the last census of 1840, and hope soon to be enabled to give them, as taken by the State Census of this year, now in course of preparation.

Our readers will be surprised to find that in 1840, they amounted to so large a sum as upwards of $20,000,000. It is, therefore, proper we should inform them, that those of the different professions named, to divers of whom we have applied, have invariably informed us, that the estimate is much under the actual amount of the present manufactures of the city.

Manufactures in the City of New York, according to the Census of 1840:

Machinery,	$1,150,000	Drugs and dye stuffs,	386,000
Hardware and cutlery,	135,300	Glass,	137,171
Precious metals,	932,760	Earthenware,	14,000
Various metals,	1,087,800	Sugar,	585,000
Granite and marble,	463,850	Confectionary,	249,242
Bricks and lime,	27,000	Paper,	45,137
Cotton manufacture,	150,700	Printing and binding,	2,500,000
Mixed manufactures,	1,200,700	Cordage,	24,500
Tobacco,	187,700	Musical instruments,	353,531
Hats, caps, and bonnets,	1,031,846	Carriages and wagons,	207,874
Straw bonnets,	138,200	Mills, product of,	331,800
Leather,	1,509,156	Ships,	354,000
Soap and candles,	1,500,000	Furniture,	906,675
Liquors distilled,	750,000	Sundries not enumerated,	3,460,320
Ale and porter,	300,000		
			$20,119,762
Houses,		1,889,100	

INTERNAL IMPROVEMENTS.

STATE OF NEW YORK.

In the preceding numbers of this Magazine, we have given a variety of statements, showing the progress and present situation of the Canals of the State of New York. In order to present a full view of the subject, we add a few further statements, which will be found valuable for reference.

Amount of Tolls collected on each Canal, from the commencement of navigation of the same, in each year, up to the close of the year 1844:

Year.	Erie Canal.	Champlain.
Up to 1823 inclusive,	$190,635	
In 1824,	294,546	$46,214
1825,	492,664	73,615
1826,	687,976	74,191
1827,	775,919	83,341
1828,	727,650	107,757
1829,	707,883	87,171
1830,	943,545	89,053
1831,	1,019,714	102,896
1832,	1,085,612	110,192
1833,	1,290,163	132,572
In 1834,	$1,180,967	$115,212
1835,	1,376,673	116,131
1836,	1,440,539	115,425
1837,	1,444,170	94,726
1838,	1,414,174	104,125
1839,	1,427,031	113,753
1840,	1,597,334	102,427
1841,	1,813,650	117,841
1842,	1,568,946	95,957
1843,	1,880,314	102,308
1844,	2,190,147	116,739

Year.	Oswego Canal.	Cayuga and Seneca.	Chemung.	Crooked Lake.
1828,	$2,757	$279	..	..
1829,	9,439	8,643	..	..
1830,	12,335	11,987	..	..
1831,	16,271	12,920	..	..
1832,	19,786	13,893	..	..
1833,	23,015	17,175	$694	$200
1834,	22,168	18,131	3,378	1,473
1835,	29,203	20,430	4,715	1,833
1836,	30,469	20,523	5,066	2,312
1837,	21,092	15,968	4,331	1,521
1838,	27,372	18,397	4,394	2,016
1839,	34,162	18,747	5,187	1,721

Year.	Oswego Canal.	Cayuga and Seneca.	Chemung.	Crooked Lake.
1840,	29,522	18,848	4,958	1,723
1841,	38,344	23,583	9,396	2,017
1842,	31,222	16,948	7,702	989
1843,	36,203	19,417	9,726	1,328
1844,	56,164	24,618	14,365	1,498

Year.	Chenango Canal.	Genesee Valley.	Oneida Lake Canal.	Seneca River Towing Path.
1837,	$10,812	..	..	..
1838,	20,430	..	..	..
1839,	15,778	..	..	..
1840,	14,001	$6,930	..	..
1841,	18,815	9,927	$462	$844
1842,	13,615	13,204	462	149
1843,	16,194	15,292	507	296
1844,	22,178	19,641	621	381

Amount of Tolls collected on all the State Canals, from their commencement, to the close of navigation, in 1844.

Year.	Amount of Tolls.
Up to 1823 inclusive,	$190,635
In 1824,	340,761
1825,	566,279
1826,	765,190
1827,	859,260
1828,	838,444
1829,	813,137
1830,	1,056,922
1831,	1,223,802
1832,	1,229,483
1833,	1,463,821
In 1834,	$1,341,330
1835,	1,548,986
1836,	1,614,336
1837,	1,292,623
1838,	1,590,911
1839,	1,616,382
1840,	1,775,747
1841,	2,034,882
1842,	1,749,197
1843,	2,081,590
1844,	2,446,374
Total,	$28,440,092

EXPENDITURES ON THE CANALS.

The expenditures on the Canals by the Superintendents of Repairs, including their salaries, for the years ending 30th September, 1843 and 1844, were as follows:

	1843.	1844.
Erie and Champlain Canals,	$279,614	$371,449
Oswego Canal,	23,679	28,599
Cayuga and Seneca Canal,	10,938	14,443
Chemung Canal,	14,295	12,740
Crooked Lake Canal,	4,047	3,961
Chenango Canal,	15,063	15,960
Genesee Valley Canal,	15,210	15,557
Oneida Lake Canal,	2,233	1,636
Total,	$383,079	$464,335

COST OF THE CANALS.

The total cost of seven hundred and sixteen miles of canals and feeders, which have been completed by the State, may be thus stated:

Erie Canal—original cost of old Canal,	$7,143,790
Enlargement, as far as completed and in use, in 1844,	6,742,846
Total cost of Erie Canal, in use,	$13,886,636
Champlain Canal,	1,257,605
Lateral Canals and Feeders, as far as completed and in use,	5,433,636
Total cost of all the State Canals, as far as completed, 716 miles in length,	$20,577,876

REVENUE OF THE CANALS.

The Comptroller, in his Annual Report, January 1845, states that the net revenue from all the State canals, for the year ending 30th September, 1844, after deducting the cost of collection of tolls, and of the maintenance of the canals, is.................................$1,803,768
The average interest on the State debt is 5 1-2 per cent, which on $20,577,876, the above cost of the canals, amounts to..1,131,783
Leaving an excess of revenue last year, after paying 5 1-2 per cent. interest, of..................................$671,985

The Comptroller, however, calculates the interest on $30,461,303, which includes the expenditures on unfinished works not in use, viz: the Black River Canal, parts of the Genesee Valley Canal, and of the Erie Canal enlargement; this makes the annual interest $1,675,371, and an excess of revenue over 5 1-2 per cent of $128,397.

CANAL DEBT.

The original debt of the State for the construction of the Erie and Champlain Canals, having been paid off, as the same became due, the last of which was payable on the first of July, 1845, the present Canal Debt of the State, amounting to about eighteen millions of dollars, has been contracted on account of the Erie Canal enlargement, and for the Lateral Canals. After making an allowance for the annual interest on this debt, and for the recent reduction in the rates of tolls on the canals, made by the Canal Board of New York, we may estimate the net revenue from tolls for the ensuing year at about one million of dollars; with a prospect of a future large increase, in consequence of the recent public works constructed, and in progress, in Ohio, Indiana, and other Western States, as particularly noticed in the August number of our Magazine.

ENLARGEMENT OF THE ERIE CANAL, AND COMPLETION OF OTHER UNFINISHED WORKS.

The plan of the Erie Canal enlargement contemplated a canal 70 feet in width at the surface, and 7 feet in depth, (instead of the old canal, which is 40 feet wide by 4 feet deep,) which dimensions were adopted by the Commissioners and Canal Board in 1835, and the work was soon afterwards commenced. The Legislature, by an act passed March 29, 1842, directed a suspension of the works on the enlargement of the Erie Canal, as well as the Black River and Genesee Valley Canals. Previous to the suspension, a large proportion of the Erie enlargement had been placed under contract, and some sections of it completed. The length of the enlarged canal, at present in use, is 36 miles, principally on the Eastern Division, and 17 miles more are soon to be finished; the same having been authorized since the suspension, making 53 miles in use, or nearly ready for use, when navigation commenced this season. The extent of the sections, which had been placed under contract, was 112 miles, leaving about 248 miles, which had not been put under contract.

Among the most important structures completed are the following: Locks, 66; Aqueducts, 10; Culverts, 55; Bridges, 55; Waste Weirs, 12. All of the locks between Albany and Schenectady, and the two aqueducts across the Mohawk River, between the same places.

The new line of canal, known as the Jordan Level, about 11 1-2 miles in length, saves one mile in distance and 22 feet of lockage. The whole number of locks completed on the line of the canal, is 66, comprising most of those between Schenectady and Utica, and the north tier of combined locks at Lockport. A new aqueduct has been constructed over the Schoharie Creek, one also over Oneida Creek, and another over Onondaga Creek. The new aqueduct across the Genesee River at Rochester was completed and brought into use in April, 1842. It is a fine structure of stone, and its whole length is 800 feet. The total cost of this work was $445,387. The deep cutting through the rock portion of the mountain ridge at Lockport is in a great measure completed. The width of the old canal through the rock above the locks is thirty feet; the enlarged canal at this point is to be 62 feet wide, and the bottom is to be lowered three and a half feet.

The water to supply the canal from Buffalo to Montezuma, a distance of 159 miles, is mainly obtained from Lake Erie. By raising and strengthening the banks of the canal between Lockport and Rochester, which was done in 1844, the water was raised about 12 inches below the lock at Lockport, so as to afford four feet four inches at Rochester, an improvement which has added greatly to the facilities of navigation on this part of the canal.

According to the Annual Report of the Commissioners of the Canal Fund, in 1845, the amount paid on account of the enlargement of the Erie Canal, up to 30th Sept., 1844, was as follows:

Amount paid from Loans..............................	$9,781,000
Do paid out of Tolls..................................	2,867,851
Total paid for construction..........................	$12,648,851

The cost of completing the enlargement, on the plan of the work which is finished, is estimated at about eleven millions of dollars. The whole work, from Albany to Buffalo, was estimated by the Canal Commissioners in 1839 to cost $23,402,853. The loss to the State, in consequence of the suspension, by damages allowed to contractors and others, and the interest on expenditures for unproductive works, will amount to some millions of dollars; most of which might have been saved had the work been steadily carried on to completion.

The policy of the Erie Canal enlargement has been frequently set forth in various official documents from Canal Commissioners and other State officers, as well as Legislative Committees. The subject has called forth lengthened discussions in the Legislature of the State, and by the public press. Whatever benefits might have been expected from the measure, had it been carried through, and the work completed as rapidly as a due regard to the financial condition of the State would have permitted, it seems to be the settled policy of the State that this and other public works are to remain in an unfinished state until the Canal Debt is paid off, or reduced to a comparatively small amount.

It is, however, believed that the annual surplus from canal tolls will rapidly accumulate, with the increase of trade, even in the present state of the canal, so that public opinion may, in a few years, demand the completion of the Erie enlargement, by an appropriation of the surplus to that object. The arguments in favor of the improvement are therefore worthy of consideration, and should be kept before the people.

The actual cost of transporting a ton on the present canal, including every species of expense, except toll to the State, (according to the statements of the Canal Board,) is, on the average, nine mills per mile. The expense on other canals of similar size is stated as about the same amount. On the other hand it is ascertained, that on the Delaware and Raritan Canal, which has the same depth, (seven feet,) and only five feet more width (75,) than the enlarged Erie Canal, the cost of transporting a ton is less than four mills per mile. The circumstance, too, can hardly fail to excite attention, that while the cost of drawing by horses a loaded barge of 200 tons through that canal, 43 miles, is but $14, the expense of towing the same barge 40 miles by steam upon the navigable waters, from New Brunswick to New York, is $25. In truth, the facilities which are presented by a deep and wide canal for economical traction do not appear to be fully appreciated. After the most careful examination on this point, the Canal Board of 1840 thought it safe to assume five mills, or half a cent, as the amount per ton per mile that will be saved in transportation by enlarging the Erie Canal upon the present plan. The amount of tonnage shipped and moved upon the Erie Canal in 1839, was 848,007 tons, exclusive of the contributions from the Lateral Canals, and the total average movement of that tonnage was 154 miles. The saving of half a cent per ton per mile being for this distance 77 cents, that sum multiplied by the number of tons, (848,007,) gives the result $652,965 as the aggregate amount which would be annually saved in the transportation of an amount of tonnage equal only to that transported on the Erie Canal in 1839. The number of tons contributed by the Lateral Canals is estimated at 130,000, which are transported on an average over 160 miles on the Erie Canal, and the sum to be annually saved in transportation thereon is $106,500, making the total annual saving $759,465. Computing the progressive increase of the revenue from canal tolls at seven per cent. annually for a period of seven years, or seven and a half per cent. for ten years, we shall have in 1846 an annual saving of $1,131,003, and in 1849 of $1,329,064, to be of itself progressively increased from period to period, according to the onward march of our internal trade.

The experience of the Delaware and Hudson Canal Company, in recently enlarging their Canal, by which the dimensions have been increased about one-third from the original size of that work, and the cost of transportation thereon has in consequence been reduced thirty-three per cent., is a proof that the calculations of the New York Canal Board are well founded. The enlargement of the Erie Canal will add about two hundred per cent. to the capacity of the original work; it would seem safe, therefore, to estimate the reduction of cost of transportation at fifty per cent.

For all commercial purposes the diminution of the cost of transportation on a canal one half, is equivalent to a reduction of its length one half. In that sense, the enlargement of the channel from Albany to Montezuma (at which point the coal of Pennsylvania sent through the Chemung Canal will be received on the Erie Canal,) will operate to reduce the present distance of two hundred and six miles between these two points to one hundred and three miles; and in the like sense the completion of the enlargement from Albany to Buffalo, will abridge its total length from three hundred and sixty-four to one hundred and eighty-two miles; and thus bring Lake Erie, with all its growing commerce, within half its present distance from the tide waters of the Hudson.

No part of the State has so great an interest in a canal of large dimensions as the city of New York. Were the Erie enlargement completed, vessels of two hundred tons burthen could be loaded at Chicago, Detroit, Toledo, Cleveland, and other ports of the upper lakes, as well as on the Erie Canal, and proceed, without transhipment of cargoes, to the port of New York. It is evident that such a canal is essential to retain the business which already centres at this commercial emporium, and to divert from Montreal and Quebec the trade which the completion of internal improvements in Canada will invite thither; also to secure to New York a large proportion of that commerce which canals in the western States may be expected to divert from more remote sections of the west, which natural causes would seem to have destined for the port of New Orleans.

The construction of railroads parallel with the Erie Canal, we are aware, is looked to by some as a substitute for the enlargement of the canal; but when the requirements of the western trade are considered, it is believed that it will be seen that there will be ample employment for both species of internal improvement, with benefit and profit to the State, to the railroad companies, and the community generally.

The comparative cost of transportation on canals and railroads it is not now deemed necessary to take into consideration, any further than to say, that it is not probable the cost can be less by railroads than on a canal of large dimensions. On the completion of the enlarged canal, a barrel of flour may be transported from Buffalo to New York for fifteen cents, to which, if the present canal tolls charged by the State are added, the cost of freight and tolls will be about forty-seven cents. The lowest charge that we have heard of, for transportation on the railroads in England, is one and a half cent per ton per mile, while the usual charge there is at least twice that rate. Taking the lowest charge, and the cost of transporting a barrel of flour on a railroad from Buffalo to Albany will be fifty-four cents, to which add six cents for freight on the Hudson, and the cost per barrel from Buffalo to New York is sixty cents.

For the transportation of passengers and light freight, and in cases generally where speed is required, railroads doubtless have advantages over canals; but it may be doubted whether those advantages are sufficient to justify the abandonment of great public works like the Erie Canal enlargement, on which millions have been expended, which must prove a public loss, unless the work shall be completed.

The finished portion of the Genesee Valley Canal extends from the Erie Canal at Rochester, south forty-one miles, to a point four and a half miles south of Mount Morris, whence a branch canal extends eleven miles to Dansville, making fifty-two miles of navigable canal completed. The unfinished portion of the canal extends sixty-six and a half miles to Olean, on the Allegany River, of which all but seven miles was put under contract previous to 1842.

Cost of work completed and in use,	$1,400,125
Cost of work completed and not in use,	46,114
Cost of work commenced and not completed,	1,761,411
	$3,207,660

The canal from Rochester to Olean, one hundred and seven and a half miles, and branch to Dansville, were estimated by the Canal Commissioners, in 1841, to cost $4,688,050. Consequently, to complete the work to the Allegany River will require an expenditure of about one and a half million of dollars.

The Black River Canal extends from the Erie Canal at Rome, in the county of Oneida, to Carthage, in the county of Jefferson. The length of navigation, when the work shall be completed, will be, for the canal proper thirty-five miles, for the feeder which enters the canal at Boonville, ten miles, and for the navigation of the Black River forty-two and a half miles, making in all eighty-seven and a half miles.

The estimated cost of the work, including a feeder ten miles long for the Erie Canal, was..	$5,287,375
Total amount done and paid on contracts,..............................	1,676,904
Amount required to finish the work, including unsettled accounts,...	$610,471

EXTENSION OF THE CHENANGO AND CHEMUNG CANALS TO A JUNCTION WITH THE STATE CANALS OF PENNSYLVANIA.

The Chenango Canal is ninety-seven miles in length, extending from Utica, on the Erie Canal, to Binghamton, Broome county, where it connects with the waters of the Chenango and Susquehannah Rivers at their junction.

This canal has disappointed the expectations of its projectors, in having failed to produce a sufficient amount from tolls annually to pay the cost of its maintenance, and consequently, it has been an annual charge upon the treasury for deficiencies, for expenses, and interest, of over $100,000. The small amount of tolls received on the canal, shows that it derives but little support from the trade of the Susquehannah. It is believed that if the canal were extended to Tioga Point, where it would unite with the canals of Pennsylvania, it would soon become the avenue of an extensive interchange trade for the salt, lime, plaster, &c., of the State of New York, and the coal of Pennsylvania, the latter being wanted to supply with fuel the salt works of Onondaga, and the towns and villages on the Erie and other canals.

The Legislature of New York passed an act in 1838, directing a survey of a route for the extension of the Chenango Canal, from its present termination at Binghamton to the State line, near Tioga Point, a distance of nearly forty miles.

The valley of the Susquehannah River, along this route, is in general about a mile and a half in width. The river is from five hundred to seven hundred feet wide, and fluctuates between flood and drought, from fourteen to seventeen feet. The descent in the stream is quite uniform, being seventy-three feet from Binghamton to the State line, or less than two feet per mile. The North Branch Canal of Pennsylvania is located to the mouth of the Chemung River, about four miles south of the State line, and there are no obstacles to forming a connection therewith, on the north side of the Susquehannah. The extension of the Chenango Canal by the north line, as surveyed, is thirty-nine miles long, and is estimated to cost $788,150.

The Chemung Canal extends from the head of Seneca Lake twenty-three miles to Elmira, on the Chemung River, and has a navigable feeder of sixteen miles from Knoxville, in Steuben county. A survey was made in 1839, under the direction of the Canal Commissioners, for a route for an extension of the Chemung Canal, from its present termination at Elmira to the Pennsylvania State line, near Tioga Point. Two lines were surveyed; the length of the one on the north side of the Chemung River is seventeen miles and thirty-two chains, with seventy-five feet of lockage, estimated cost $391,056; the south line is twelve miles and sixty-two chains in length, estimated cost $271,648.

The Chemung River unites with the Susquehannah at Tioga Point, situated twenty miles below Elmira, following the bank of the river, and about four miles in a south course from the State line.

The North Branch Canal of Pennsylvania is located from the village of Athens, at Tioga Point, to the junction of the Lackawanna with the Susquehannah, ten miles above Wilkesbarre, about ninety miles in length, (or ninety-three miles from the State line.) The State has expended on the work over $2,348,000, and about $1,200,000 is the estimated amount required to finish it to the State line. Its completion has been recently undertaken by an incorporated company, on whom the State have conferred the rights and benefits of the canal, including about sixteen miles of finished canal, extending from the Lackawanna Creek, through Wilkesbarre, to the mouth of Solomon's Creek, being all in the coal field of the Wyoming Valley. The company's work, when completed, will therefore be one hundred and nine miles in length.

From the mouth of the Lackawanna to tide-water, at the head of the Chesapeake Bay, is a continuous line of canals, along the Susquehannah River, two hundred miles in extent, which canals have all been, for several years, in operation. From Tioga Point to Havre de Grace, at the mouth of the Susquehannah River, and head of Chesapeake Bay, the distance is two hundred and ninety miles, by a chain of canals constructed at a cost of over ten millions of dollars, (the North Branch section of ninety miles being in an unfinished state.) The amount of lockage, descending, from Tioga Point to Chesapeake Bay, is seven hundred and nineteen feet.

It will be observed from the preceding statements, and from an inspection of maps, that, by an expenditure of about twelve hundred thousand dollars, both the Chenango and Chemung Canals may be extended to Tioga Point, where they would connect with the canals of Pennsylvania, and open a navigable communication between the waters of Chesapeake and Delaware Bays, (these bays being connected by the Chesapeake and Delaware Canal,) and the Erie Canal at two points, namely; at Utica, at the junction of the Chenango Canal, and at Montezuma, at the junction of the Cayuga and Seneca Canal, which points are distant ninety-five miles apart. The length of communication between Utica and Montezuma, supposing the Chenango and Chemung Canals to be connected at Tioga Point, following the route of those canals, and passing through Seneca Lake and the Cayuga and Seneca Canal, will be about two hundred and forty miles.

The subject of the proposed extension and connection of these canals is viewed with great interest by a large portion of the people of the two great States, whose public works would thus be united. The stock of the North Branch Canal Company has been subscribed the present season, and the completion of the line of Pennsylvania canals to the boundary of New York may soon be expected. It is estimated by the company that the tolls on the one hundred and nine miles of that canal will amount the first year after the work is completed to $300,000, of which $125,000 are estimated on two hundred and fifty thousand tons of anthracite and bituminous coal; the remainder on iron, gypsum, salt, lumber, agricultural produce, merchandise, &c.

Of all canals, those extending from coal fields to their natural markets stand pre-eminent for usefulness to the public, and for profit to their owners. The counties of Bradford and Luzerne, in Pennsylvania, abound both in anthracite and bituminous coal, as well as iron, and Wyoming county in anthracite and iron. In addition to these resources, the canal would derive a large income from the lumber trade, as well as from tolls on salt, gypsum, and miscellaneous articles. It was the opinion of the late Governor Clinton that the consumption of coal in North Western New York alone would soon exceed five hundred thousand tons per annum. Indeed, the quantity for the manufacturing of Onondaga salt alone, it is computed, would be one hundred thousand tons a year. And this estimate is predicated on the opinions of men whose authority may be safely relied on. The cities of Albany, Troy, Schenectady, Utica, Rochester, and Buffalo, and the large and flourishing villages of Syracuse, Geneva, Ithaca, Auburn, Lockport, &c., are all to be supplied with the Susquehannah and Lackawanna coal. Nor does the consumption stop here. The Lake trade—the steamboats on the lakes, the supply of the western country by the lakes, and the various canals, must in a great measure look to this channel for their supplies of both anthracite and bituminous coal, and indeed for a supply of anthracite altogether from the North Branch and Erie Canals.

The following is a summary of the canals in New York and Pennsylvania, which will be connected by the completion of the North Branch Canal, and the extension of the Chenango and Chemung Canals.

In Pennsylvania.	Length.		Cost.
North Branch Canal,	93	miles	$3,646,792
State Canals to Columbia,	155	"	4,094,726
Tide Water Canal,	45	"	3,400,000
Total N. Y. State line to Chesapeake Bay,	293	"	$11,141,518
West Branch Canal,	75	"	1,708,579
Juniata Canal,	130	"	3,437,334
Wisconisco Canal,	12	"	400,000
Bald Eagle Canal,	25	"	225,000
Sinnemahoning Canal,	39	"	400,000
Conestoga Canal,	18	"	190,073
Codorus Canal,	11	"	100,000
Union Canal,	82	"	2,994,423
	685	"	$20,596,927
In New York.			
Chenango Extension Canal,	39	"	788,150
Chenango Canal,	97	"	2,420,000
Chemung Extension Canal,	17	"	391,056
Chemung Canal,	23	"	684,600
Cayuga and Seneca Canal,	23	"	237,000
Erie Canal, (partly enlarged)	364	"	19,792,641
Champlain Canal,	65	"	1,257,604
Oswego Canal,	38	"	565,437
Genesee Valley Canal,	52	"	1,400,135
Total,	1403	"	$48,133,550

The above is exclusive of various other canals in Pennsylvania and New York, branching off from, or connected with the works enumerated above; also of the unfinished portions of the Genesee Valley Canal, and the Black River Canal.

The amounts required to complete the unfinished Canals in the State of New York, and the proposed connexions with the Canals of Pennsylvania, are estimated as follows:

Enlargement of Erie Canal,	$11,000,000
Genesee Valley Canal,	1,480,390
Black River Canal,	610,471
Chenango Canal Extension,	788,150
Chemung Canal Extension,	391,056
Total,	$14,270,067

If we call the sum required to accomplish the above very desirable objects, fifteen millions of dollars, the annual interest thereon, at 5 per cent. will be $750,000, and we can readily conceive that the benefits to be derived from the completion of these works will abundantly compensate for the expenditure, and that the additional revenues which will flow into the Treasury of the State of New York will amply reward the enterprise so necessary to complete her system of Internal Improvements.

The following tables, compiled from public documents, are given with the preceding statements, for the purpose of exbiting the progressive increase during a series of twenty years, in the official valuation of the taxable property in the City and State of New York respectively.

They embrace two periods of ten years each, the one immediately preceding, and the other immediately following the completion of the Erie Canal, in 1825.

1. *Official valuation of the real and personal property of the City of New York, from* 1815 *to* 1825, *inclusive:*

Year.	Real Property.	Personal Property.	Total.
1815	$57,000,000	$24,636,042	$81,636,042
1816	57,308,200	24,766,000	82,074,200
1817	57,799,435	20,996,200	78,895,735
1818	59,827,285	20,426,806	80,254,091
1819	60,500,295	18,612,766	79,113,061
1820	52,084,328	17,446,425	69,530,753
1821	50,619,720	17,665,350	68,285,070
1822	53,330,574	17,958,570	71,289,144
1823	50,184,229	20,756,591	70,940,820
1824	52,019,730	31,055,946	83,075,676
1825	58,425,895	42,734,151	101,160,040

2. *The like from* 1825 *to* 1835, *inclusive:*

Year.	Real Property.	Personal Property.	Total.
1825	$58,425,895	$42,734,151	$101,160,046
1826	64,912,850	42,534,931	107,447,781
1827	72,617,770	39,594,156	112,211,926
1828	77,139,880	36,879,653	114,019,533
1829	76,834,880	35,691,136	112,526,016
1830	87,603,580	37,684,938	125,288,518
1831	97,221,870	42,058,344	139,280,214
1832	104,042,405	42,260,213	146,302,618
1833	214,124,566	52,366,976	166,491,542
1834	123,249,280	63,299,231	186,548,511
1835	143,732,425	74,991,278	218,723,703

Increase in the valuation of real and personal estate of the city, in the ten years preceding 1824,	$1,439,634
Increase from 1824 to 1835 inclusive,	$135,648,027

3. *Official valuation of the real and personal estate of the State of New York, from* 1815 *to* 1825, *inclusive:*

Year.	Real Property.	Personal Property.	Total.
1815	$239,667,218	$41,587,905	$281,255,123
1816	250,182,474	40,680,034	290,862,508
1817	265,710,214	38,457,247	304,167,461
1818	271,721,102	37,611,638	309,332,740
1819	243,942,231	37,054,513	280,996,744
1820	222,148,986	33,403,379	255,552,365
1821	207,446,531	33,199,982	240,646,513
1822	198,439,210	32,864,290	231,303,500
1823	215,238,913	46,903,723	252,142,636
1824	211,577,310	57,908,315	269,485,625
1825	199,533,471	63,893,875	263,427,346

4. *The like from* 1825 *to* 1835 *inclusive:*

Year.	Real Property.	Personal Property.	Total.
1825	$199,533,471	$63,893,875	$263,427,346
1826	214,802,204	64,590,093	279,392,297
1827	238,430,138	65,823,585	304,253,723
1828	275,861,471	68,785,292	344,646,763
1829	238,747,841	70,794,638	309,542,479
1830	250,975,885	68,142,411	319,118,296
1831	271,053,169	70,801,274	341,854,443
1832	294,596,149	75,956,259	370,552,408
1833	Returns incomplete.	..	..
1834	347,608,841	118,849,137	466,457,978
1835	403,517,585	125,058,794	528,576,379

Decrease in the value of real and personal property of the State, in the ten years next preceding 1825, ... $17,827,777

Increase in ten years next subsequent,..$265,149,033

STATISTICS OF EXPORTS

OF DOMESTIC PRODUCE AND MANUFACTURES, FROM THE UNITED STATES TO FOREIGN COUNTRIES.

	Value of articles exported.			
Years.	Cotton.	Tobacco.	Rice.	Flour.
1821	$20,157,484	$5,648,962	$1,494,307	$4,298,043
1822	24,035,058	6,222,838	1,563,482	5,103,280
1823	20,445,520	6,292,672	1,820,985	4,962,873
1824	21,947,401	4,855,566	1,882,982	5,759,176
1825	36,846,649	6,115,623	1,925,245	4,212,127
1826	25,025,214	5,347,208	1,917,445	4,121,466
1827	29,359,545	6,816,146	2,343,908	4,434,881
1828	22,487,229	5,480,707	2,620,696	4,283,669
1829	26,575,311	5,185,370	2,514,370	5,000,023
1830	29,674,883	5,833,112	1,986,824	6,132,129
1831	25,289,492	4,892,388	2,016,267	10,461,728
1832	31,724,682	5,999,769	2,152,361	4,974,121
1833	36,191,105	5,755,968	2,774,418	5,642,602
1834	49,448,402	6,595,305	2,122,292	4,560,379
1835	64,661,302	8,250,577	2,210,331	4,394,777
1836	71,284,925	10,058,640	2,548,750	3,572,599
1837	63,240,102	5,795,647	2,309,279	2,987,269
1838	61,556,811	7,392,029	1,721,819	3,603,299
1839	61,238,982	9,832,943	2,460,198	6,925,170
1840	63,870,307	9,883,957	1,942,076	10,143,615
1841	54,330,341	12,576,703	2,010,107	7,759,646
1842	47,593,464	9,540,755	1,907,387	7,375,356
1843 (9 months)	49,119,806	4,650,979	1,625,726	3,763,073
1844	54,063,501	8,397,255	2,182,468	6,759,488

Years.	Pork, Live Hogs, Lard and Bacon.	Beef, Cattle, Hides, and Tallow.	Butter and Cheese.	Skins and Furs.	Fish.
1821	$1,354,116	$698,323	$190,287	$766,205	$973,591
1822	1,359,899	844,534	221,041	501,302	915,838
1823	1,291,322	739,461	192,778	672,917	1,004,800
1824	1,489,051	707,299	204,205	661,455	1,136,704
1825	1,832,679	930,465	247,787	524,692	1,078,773
1826	1,892,429	733,430	207,765	582,473	924,992
1827	1,555,698	772,636	184,049	441,690	987,447
1828	1,495,830	719,961	176,354	626,235	1,066,663
1829	1,493,629	694,955	176,205	526,507	968,068
1830	1,315,245	717,683	142,370	641,760	756,677
1831	1,501,644	829,982	264,796	750,938	929,834
1832	1,928,196	774,087	290,820	691,009	1,056,721
1833	2,151,588	955,076	258,452	841,933	990,290
1834	1,796,001	755,219	190,099	797,844	863,674
1835	1,776,332	638,761	164,809	759,953	1,008,534
1836	1,383,344	699,166	114,033	653,662	967,890
1837	1,299,796	585,146	96,176	651,908	769,840
1838	1,312,346	528,231	148,191	636,945	819,003
1839	1,177,230	371,646	127,550	732,087	850,538
1840	1,894,894	623,373	210,749	1,237,789	720,164
1841	2,621,537	904,918	504,815	993,262	751,783
1842	2,629,403	1,212,638	388,185	598,487	730,106
1843 (9 months)	2,120,020	1,092,949	508.968	453,869	497,217
1844	3,236,479	1,810,551	758,829	742,196	897,015

Year.	Lumber.	Manufactures.	Year.	Lumber.	Manufactures.
1821	$1,512,808	$2,752,631	1833	$2,569,493	$6,557,080
1822	1,307,670	3,121,030	1834	2,435,314	6,247,893
1823	1,335,600	3,139,598	1835	3,323,057	7,694,078
1824	1,734,586	4,841,383	1836	2,860,691	6,107,528
1825	1,717,571	5,729,797	1837	3,155,990	7,136,997
1826	2,011,694	5,495,130	1838	3,166,196	8,397,078
1827	1,697,170	5,536,651	1839	3,604,399	8,325,082
1828	1,821,906	5,548,354	1840	2,926,846	9,873,462
1829	1,680,408	5,412,320	1841	3,576,805	9,953,020
1830	1,836,014	5,320,980	1842	3,230,003	8,410,694
1831	1,964,195	5,086,890	1843	1,687,809	6,886,986
1832	2,096,707	5,050,633	1844	3,011,968	9,768,129

CONSUMPTION OF FOREIGN MERCHANDISE IN THE UNITED STATES.

Table showing the value of Foreign Merchandise retained for Home Consumption, in each year, from 1821 *to* 1844.

Year.	Amount.	Year.	Amount.
1821	$41,283,236	1833	$88,295,576
1822	60,955,339	1834	103,208,521
1823	50,035,645	1835	129,391,247
1824	55,211,850	1836	168,233,675
1825	68,749,482	1837	119,134,255
1826	60,434,865	1838	101,264,609
1827	56,080,932	1839	144,597,607
1828	66,914,807	1840	88,951,207
1829	57,834,049	1841	112,477,096
1830	56,489,441	1842	88,440,549
1831	83,157,598	1843 (9 months)	58,201,102
1832	76,989,793	1844	96,950,168

The above shows the amount of imports in each year, deducting the amount of foreign merchandise re-exported in the same year.

It will be observed that the years during which the compromise tariff was in operation, viz.: from 1833 to 1842, exhibit an immense consumption of foreign merchandise compared with that of any other period. The annual average consumption during those years was $114,399,435, while for the twelve years previous, viz.: 1821 to 1832 inclusive, the annual average was $60,760,582; showing an annual average increase during the compromise, or free trade period, of $53,638,853 in the consumption of foreign merchandise.

EXPORTS AND IMPORTS OF THE UNITED STATES ANNUALLY,

FROM 1821 TO 1844.

Year.	*Value of Exports.*			*Value of Imports.*
	Domestic Produce, &c.	Foreign Merchandise, &c.	Total.	
1821	$43,671,844	$21,302,488	$64,974,382	$62,585,724
1822	49,874,079	22,286,202	72,160,281	83,241,541
1823	47,155,408	27,543,622	74,699,030	77,579,267
1824	50,649,500	25,337,157	75,986,657	80,549,007
1825	66,944,745	32,590,643	99,535,388	96,340,075
1826	53,055,710	24,539,612	77,595,322	84,974,477
1827	58,921,691	23,403,136	82,324,827	79,484,068
1828	50,669,669	21,595,017	72,284,686	88,509,824
1829	55,700,193	16,658,478	72,358,671	74,492,527
1830	59,462,029	14,387,479	73,849,508	70,879,920
1831	61,277,057	20,033,526	81,310,583	103,191,124
1832	63,137,470	24,039,473	87,176,943	101,029,266
1833	70,317,698	19,822,735	90,140,433	108,118,311
1834	81,024,162	23,312,811	104,336,973	126,521,332
1835	101,189,082	20,504,495	121,693,577	149,895,742
1836	106,916,680	21,746,360	128,663,040	189,980,035
1837	95,564,414	21,854,962	117,419,376	140,989,217
1838	95,033,821	12,452,795	108,486,616	113,717,404
1839	103,533,891	17,494,525	121,028,416	162,092,132
1840	113,895,634	18,190,312	132,085,946	107,141,519
1841	106,382,722	15,469,081	121,851,803	127,946,177
1842	92,969,996	11,721,538	104,691,534	100,162,087
1843 (9 months)	77,793,783	6,552,697	84,346,480	64,753,799
1844	99,715,179	11,484,867	111,200,046	108,435,035

N. B. From 1821 to 1842 inclusive, the financial year ended on the 30th September—for 1842 and 1843, on the 30th June.

RAILROADS, MINING,

AND OTHER INTELLIGENCE FROM EUROPE BY LATE ARRIVALS.

We ask attention to the following items extracted from the London Mining Journal.

It will be seen by a perusal of them, what an impetus there is in progress in Russia, France, and Belgium, in the great and important works of internal communication and the development of their mineral resources. The day has gone by, when these great continental powers would listen to the false and syren song of "Free Trade," and let England alone extract the treasures which nature offers every where to the industrious hand of man from her bounteous stores.

We rejoice in this, because we think we see a brighter day ahead for the whole human family. The introduction of these arts into Continental Europe will prove an inestimable blessing to millions of her dense population. Who can tell where these things are to end? Think only of a passage by railroad from Paris, through Germany and Russia, to Moscow, in a very few days!! Can any man pretend to tell the great moral effect that is to be produced by this new state of things, in which time and space will no longer be controlling powers in human affairs? We confess, to us there appears, indeed, a new era approaching, and in looking at the probable effects to be produced, we think no intelligent man can doubt that it forebodes great good to the whole human race. Its tendency to bring different nations into close communion with each other, must vastly lessen national prejudices, and make man a more social being. The general impulse that is felt, from one end of the world to the other, to examine with the light of science into all natural advantages, and to profit by them, what is it, but approaching nearer and nearer to the attainment of a perfect knowledge of the more refined laws of nature, through which greater and more numerous blessings may be drawn from her bounties?

We have long thought the happiness of the mass of mankind would some day become more general, and we sincerely hope and believe the rapid advancement now making in every science and every art, will greatly accelerate so desirable a consummation.

From the London Mining Journal of July 19th, 1845.

IRON TRADE.

The Iron works in Merthyr Tydvil and neighbouring districts are carried on most vigorously, many having no rest, even on Sundays; water is also very plentiful this year, quite different to what it was this time last year. The price of iron is not so high as it was some two or three months ago, yet if it will continue as at present, masters and men will do well. Such has been the influx of strangers to all the iron works, that cottages have become very scarce, and many are being built in every direction.

From the same.

COAL AND IRON MINES OF FRANCE AND BELGIUM.

The rapid progress that has been making of late years in France and Belgium, in railways and steam navigation, has opened a vast resource to mining operations. Hitherto these countries, although abounding in iron, lead, and other metallic riches, with extensive fields of coal mines, imported the greater portion of their supplies from the north of England and Wales; partly from a want of proper machinery to work them, and secondly, the difficulty and expense of transporting the produce of the mines to Paris and the most advantageous markets in the manufacturing districts of Rouen, St. Quentin, Elbæuf, Louvrier, Sedan, Lyons, &c., where, by the emigration of some of the best workmen, from Manchester, Leeds, Sheffield, Birmingham, Nottingham, Norwich, and other towns of England as well as Glasgow, cotton and woollen manufactures, iron, &c., worked by them and English made machinery, have sprung up in every direction, initiating the natives into the use of what they formerly looked upon as a chimera or impossibility. The number of English families that have taken up their residence since the peace, both in France and Belgium, where wood and turf were the chief fuel, has been the means of causing searches to have been made for coal in various districts; this, added to the impetus given of late years by the French government in the building of steam vessels, so as to compete in a measure with the progress making in steam navigation in the United Kingdom, has opened a vast field for excavating this rich resource to the mining interest.

The great demand that is likely to be made for some years hence, for both wrought and cast iron, in France and Belgium, for the railways now in progress or projected, has given a speculative turn to the holders of iron mines that never could have been foreseen twenty years ago. Steam machines are now at work in all the mineral departments or districts that were formerly looked upon as barren, or nearly worthless, as the speculators in railways find they must not only make the rails and machinery in the country, but also procure the means to do so from the hidden resources in the earth. This is, in a great measure, to be attributed to the extensive railway operations going forward from one end of Great Britain to the other, causing that demand for iron that it has nearly doubled in value within the last two or three years, so as to preclude its being exported to the continental markets, which now must depend upon their own natural industry and mining powers.

The departments most fertile in coal, are the Meuthe, Sambre and Meuse ,Maine, Haut Maine, Moselle, the Rhine, and North, in which iron also abounds, and likewise throughout Belgium, where very extensive works are also at present in operation, chiefly under the direction of Englishmen. The late treaty between Belgium and the Zollverein, or monopolising powers of Germany and Prussia, which have materially reduced the duties on Belgian produce, will be the means of causing a surprising demand, both for coals and iron, for the railways now in progress.

From the London Mining Journal, August 2d, 1845.

IRON MARKET OF GREAT BRITAIN.

The consideration of the circumstances affecting that staple commodity of so large a portion of the Kingdom—*Iron*—is always of immense importance, and becomes particularly more so, at the present time, when its useful application in the arts is daily being vastly extended. In addition to the immense demand for sheet iron for the purposes of ship building all round our coasts, its application to smaller articles of commerce, for domestic and agricultural uses, consumes a vast quantity; but the greatest increase in the future demand for iron will be for railways, both here and on the continent. In this country alone, the numerous gigantic undertakings which have already received the royal assent are estimated at eighteen hundred miles, and it is probable, before the approaching prorogation, legal powers will have been given for the construction of *two thousand three hundred miles of railway*, the majority of which, being double lines, we may take in round numbers at eight thousand miles of rails; to which must be added chains, bolts, sleeper iron, extra lines, and machinery at stations, besides what is required for the working stock, which will of course be put in hand to be ready on the completion of the lines; creating at least a demand for railway iron amounting to one million two hundred thousand tons, which will be required in the next two years, without reckoning a single pound for foreign demand—while, notwithstanding the extension of the number of furnaces in Belgium, France, and other parts of Europe, or the "go ahead style" of producing iron which the Americans are attempting, it is certain that a large demand for iron in England will arise from the foreign railway schemes, many of which have already broke ground, and all are anxious to begin.

For the last three or four months the iron trade has been in a desponding state; declining prices and increasing stocks have continually harassed the manufacturers, and occasioned strikes of the men, when an unavoidable decrease in wages was announced, added to the gloom; there is, however, now, a prospect of steady demand for iron for many years, for the continuance of which much depends on the masters themselves.

A regular demand of twelve thousand tons per week would employ all the furnaces at present in make, and double their produce.

The weekly make of South and North Wales, Staffordshire, Yorkshire, Lancashire, the North of England, and in Scotland, is estimated at six thousand seven hundred tons per week, and as more furnaces will continually be blown in, and in each session fresh railway schemes will be ready to be proceeded with, a continual and regular weekly make of iron may be depended upon, from this source alone, for years to come.

The question now arises—will this apparently prosperous state of things be of that stable benefit to all concerned in the iron trade, which from the nature of things it ought to be? We trust it will. It is true on other occasions of expected prosperity prices have run up to a most unhealthy figure. Large fortunes have been made in an incredibly short time, only to be lost again on a sudden withdrawal; in the excitement of the receipts of extensive orders, and the securing additions, even as high as seventy to eighty per cent., were made on the workmen's wages; but no sooner was the bubble burst, than an attempt at an equivalent reduction caused strikes and outbreaks, depression, and complete idleness. Having thus seriously felt the evils of wide fluctuations in the market, it is to be hoped the masters—and it rests with themselves—will prevent unusual excitement in the trade. Let them as a body be content with a good profit, and not attempt to grasp a fortune in a day, because that profit *is good*. Let them secure to the workmen a fair, nay, even a liberal return for their toil and danger; and instead of those ruinous changes in price which make trade a game of chance, and which defy calculation, they will secure a very large, and what is better, a long foreseen steady return for their capital; it is only under such circumstances that trade can really flourish, and with a steady determination to pursue such a course, under the approaching demand it must flourish, and that for years to come.

From the same.

THE IRON TRADE ON THE CONTINENT OF EUROPE.

The iron sales at the annual fair held at Chalons sur Soane were extremely advantageous to the iron masters. The prices of iron of every size and description were firmly maintained, the sales very extensive, and large orders given. In Belgium the same improvement in the demand for iron exists as in France.

IRON TRADE OF GREAT BRITAIN.

Our imports of foreign iron in 1844 were, chromate of iron 2365 tons, pigs 52 tons, bars unwrought 24,483 tons, Bloom iron 524 tons, old broken and cast iron 97 tons, unwrought steel 2717 tons, wrought steel and iron entered by weight 153 tons. Ditto entered by value £11,905.

Of foreign iron in bars 21,598 tons were retained for home consumption, and 5876 tons exported, of which 3371 tons went to India, and 1013 to our North American colonies. Of British iron we exported that year 99,960 tons of pig iron, 230,935 tons bar iron, 18,980 tons bolt and rod iron, 18,969 tons cast iron, 1963 tons iron wire, 2400 tons of anchors, grapnels, &c., 15,654 tons in hoops, &c., 726 tons nails, &c., and of all other sorts, except ordnance, 48,170 tons. Of old iron for remanufacture 9271 tons, and of unwrought steel 5121 tons. Total imported by weight 52,989 tons. Total exported foreign iron 5876 tons. British iron 447,028 tons, exclusive of steel.

LONDON PRICES OF IRON, AUGUST 2, 1845.

Iron bar Wales,........................	£7,	5,		to	£7,	10,	per	ton.
" " London,......................				"	8,	10,	"	"
Staffordshire,..........................	9;	10,		"	10,		"	"
Scotch Pig,............................	3,	2,	6,	"	3,	5,	"	"

From the same.

LONDON, August 2, 1845.

We have before alluded to the impetus that railway speculations have given to the iron masters and mine owners throughout France and Belgium to embark more extensively in working them. These two countries abound in iron, lead, zinc, and coal, which materials they have, however, hitherto principally imported from England, as machinery has been wanting; but within the last five years, so many experienced English machinists have gone over, that they now, bid fair to compete with us, especially as labor and provisions are not more than half what they are in this country. France, and in fact the whole of the continental powers, have ever been jealous of the inventive genius of Englishmen, and their speculative commercial enterprise, which has rendered England, although an isolated island, to be considered and respected as the great emporium of wealth, talent, and mechanical perfections, not only as regards manufactures but in machinery of every description, particularly that of steam navigation and railways. The rapid progress that has been made of late years in both the latter branchest hroughout the United Kingdom, has not only aroused the attention of the governments of France, Belgium, Germany, Austria, and Russia, but private individuals, to put down the monopoly that existed in this country over machinery in general, whether for steam vessels, locomotives, or manufactories where steam power is used. They now have begun to construct their own machines and work their own mines, especially iron and coal, so as to enable them to furnish, the great demand that is making for iron rails and all the "materiel" necessary for the lines in progress from one end of the continent to the other; north to south, and east to west; and that chiefly under the superintendence of Englishmen. It is British capital and enterprise, however, it must be observed, that are giving this speculative development to the industry of foreign countries, particularly in France, Belgium, Spain, Portugal, Austria, and Italy, where, in a few years hence, there will not only be railways, intersecting from one point to the other, but giving the greatest facilities to the working of some of the richest mines that have been hitherto lost to man.

An interesting return has been made by the minister of public works at Paris, compiled from the reports of a commission of the most experienced geologists, engineers, and miners, giving the names of all the different departments or districts throughout France, in which silver, iron, copper, lead, zinc, tin, manganese, coal, &c., are found; also marble and stone suited for lithographic purposes.

It appears that the number of mines now being worked amount to 446, viz: 261 of coal, 143 of iron, 14 of lead, copper, silver, antimony, and manganese, 16 of bituminous minerals, and 12 of rock salt. These works give employment to upwards of 33,880 workmen. The iron works in France have of late years acquired great extent, and several very important improvements have been introduced in the different processes of producing cast and wrought iron, on the most approved methods used in our large iron mining districts.

To show the advance that the making and use of engines, locomotives, boilers, &c., has made during the last five or six years—there are at present 6350 steam boilers at work, 5613 of which were constructed in France, 3369 steam engines, of which 633 are high pressure and 2736 low pressure, worked by 4652 boilers, representing a force of 127,544 horse power, and replacing at least the labour of 892,790 persons; thereby affording a most astonishing facility to accomplish those works that were years ago considered impossible. The enlightened government of Louis Philippe, is giving every encouragement to the perfection of machinery and mining operations throughout the country. The building of steam vessels, and the extension of railway communication, so as to compete with England in the advancement of transit in the interior and commercial facilities of conveyance over the ocean. Thirty years of peace in Europe has had the most wonderful effect in ameliorating the condition of man, and the improvement of science, manufactures, and every branch of industry, from the barbarous clime of Russia to the fair and genial skies of Portugal, Spain, and Italy.

From the London Mining Journal.

COLLOSSAL MANUFACTURING ESTABLISHMENT.

There is now in full operation at St. Petersburgh perhaps the most extraordinary, as well as gigantic, commercial establishment which can be found in the history of the world, ancient or modern.

Messrs. Eastwick and Harrison, the famed locomotive engineer, and boiler makers of Philadelphia, having succeeded in obtaining the great contract for the construction of the locomotive requirements for the system of railroads about being carried out in Russia, have located themselves there, built a manufactory of immense extent, in which 3500 men are constantly employed, and in the conducting of which there are some curious features. To keep order among such a congregation—exceeding the population of a good sized town, and consisting of English, Americans, Scotch, Irish, Germans, and Russians—a company of soldiers is kept on duty at the works, and a perfect police force, whose duties are confined to the establishment. Refractory men of every nation are discharged for irregular conduct, excepting Russians, and these (we suppose it is to inspire them with a love for their country, and admiration for the *gentle* Nicholas,) are, for the slightest offence, immediately tied up to the triangles, soundly flogged, and sent again to their work. It is but justice to Messrs. Eastwick and Harrison to say, that they have strongly appealed against this treatment, so peculiar to this semi-barbarous nation, but without effect. The plan of paying this enormous multitude is ingenious; on being engaged the man's name is not, we believe, even asked, but he is presented with a medal, numbered; in the pay house are 3500 wooden boxes, and on presenting himself on Saturday night for his pay, the clerk hands him his money, takes his medal as a receipt, which is dropped into the box of its number, and gives him another medal as a pledge of engagement for another week. We are promised a plan of the work, with a more particular account of the method adopted; and as the principal upon which such a gigantic affair is conducted must be interesting, we shall have much pleasure in laying the particulars before our readers.

A GLANCE AT THE OLD WORLD.

The English Steamer of the 4th of August has arrived, and brings with it our usual supply of Magazines. In nothing do we more realise the advantages of the navigation of the ocean by steam, than in the rapidity with which we are put in possession of the discoveries, inventions, and valuable ideas of the men of other lands—our co-labourers in the cause of education, virtue, and the general advancement of our race. In these "Glances" we do not aim at an elaborate review of all the novelties of the old world. Our space is circumscribed. We simply propose to furnish an index, which shall direct our readers to those subjects they may explore pleasantly at their leisure.

SCIENTIFIC.

Our first look was at our favourite, the "Edinburgh Philosophical Magazine." The original papers in this number are of an interesting character to the learned, but not generally of interest to others. Thus we have an able paper on the causes of lines in the prismatic spectrum, by Dr. Miller; another on the theory of conjugate points; on an article in commerce called liquid storax, a kind of balsam, whose extraction is uncertain; on the action of acids of a peculiar character; and on the resolution of equations in the fifth degree, which, to a certain number of our readers, will doubtless be a source of gratification.

We perceive that the British Government is about to erect altitude and azimuth instruments for extra meridional observations of the moon, a novelty in astronomical observations. For the last century the meridian has been the fundamental basis of calculation. Our own astronomers at Washington should look into this matter, and see if the principle could not be adopted at our own National Observatory in that city. The Report of the Royal Astronomical Society, which is continued in this number, is full of important and interesting facts, but we fear that we should tire the general reader even by their analysis.

We perceive that the Botany of Spain is undergoing a rigid examination by a German naturalist, Moritz Willkomm. Science has been, of late years, but little benefited by the efforts of the learned in Spain. The unhappy state of that country, the insecurity of life, the intestine divisions, and the dangers to which travellers have been exposed, have made it a closed book to the world of letters. We are glad to perceive that its "Flora" has attracted the attention of a learned man. His researches are highly interesting. We notice that in August last, in Granada, he found the Agave Americana growing wild in great profusion, and in full bloom. In a side valley, known as the Dehesa de S. Geronimo, whose mountain boundary rises 8,000 feet, he found two celebrated trees—Lonicera Arborea, and Adenocarpus Decorticans—both in fruit. The former is, in fact, a rare tree of Asia Minor, and the latter is remarkable, as its name would indicate, for its bark stripping off in ribands, even from the youngest branches. It is the opinion of some of our most profound geographers and naturalists, that vegetation is defined by longitude rather than latitude. Whenever we see tropical plants pushing up beyond their accustomed *habitats*, we seem to verify the proposition. Mr. Willkomm's report is exceedingly valuable. We find a large list of rare plants, and also in his catalogue some which are to be found in our own country. We should like to see a review of this paper by some experienced American botanist.

The ichthyology of China has recently been finely illustrated by Dr. Richardson. It appears that Linnæus was acquainted with but few of their fishes—Langsdorf added a few more to the list, and a Russian navigator has furnished us with a small additional number. Our knowledge of them was chiefly confined to the accounts furnished pictorially by the Chinese themselves, and they were figured so much in the lantern and porcelain style, that scientific men gave but little attention to the subject. Recently our stock of knowledge has been much enlarged by the labours of Reeves and Richardson.

Dr. Latham has advanced the opinion to the British Association, that the ergot, or spurred rye, is on the increase in England.

We observe that Mr. Lyell, whose travels in this country have excited much attention, is reading papers to the Geological Society on various formations in the U. S.

A new piano has been invented in France, and patented in that country and England, which admits of the transposition of a piece of music, without respect to the written notes, by a mechanical contrivance merely. The plan is fully described in the "Repertory of Inventions" for August.

A novelty has made its appearance in England, the invention of a Mr. Benningfield, which he calls an Electric Gun. The explosive power is gas, ignited by electricity, and the machine discharges "a thousand balls in a minute" with a force not equalled by that of gunpowder. We reconcile ourselves to the production of these destructive weapons, in the hope that the more fatal *they* become, the less mankind will be disposed to use them.

The speed of the Express trains on the different English Railroads is ascertained to be as follows:

The Brighton train,	34	miles	an hour,	including	stoppages.
Northern and Eastern,	45	"	"	"	"
South Western,	40	"	"	"	"
Birmingham,	38	"	"	"	"
South Eastern,	28	"	"	"	"
Great Western, (194 miles in 4½ hours,)	42	"	"	"	"

The Hydro-electric Machine, invented by Mr. Armstrong, of which a gigantic specimen has reached this city, and is now exhibited at Castle Garden, by Professor Collyer, is attracting the attention of the learned abroad. One now in London has charged thirty-three feet square of coated surface, sixty times in a minute, or once in a second. Mr. Armstrong has also obtained an alternating current, by a slight mechanical arrangement, sufficient to produce a permanent though slight scintillation of two pieces of steel attached to opposite ends of the wire, and rubbed against each other.

In the "Spirit of Military Institutions," by Marshal Marmont, he gives it as his opinion that the introduction of Paixhans guns will render the construction of line of battle ships useless, and that small ships, carrying two of these weapons each, will be a match for their larger antagonists.

A description of Port Louis, East Falkland Islands, which we find in the "Nantical Magazine," gives us to understand that it is now no longer the seat of government there, but has been supplanted by Stanley Harbour, where a fine town is growing up under English authority. Four American whalers were refitting there together in March last. Beef is four cents a pound, the cattle being fed on Tussac grass, about which so much has been recently said in our own agricultural publications.

The scarcity of plumbago in England, and the exhaustion of the mines of Borrowdale, Cumberland, have led to a curious attempt on the part of Mordan, the famous pencil maker, to supply the deficiency. He has for a long time been buying up the dust of the Cumberland sawings, at an outlay of about $60,000. This was carefully cleaned, exhausted of air (in parcels), and submitted to a pressure in that state of 5,000 lbs. The result is, that he has solidified his dust into conveniently shaped cakes, from which he saws out his pencil leads with great readiness. We have in this country several localities abounding with "black lead," and can furnish the English pencil makers with what they desire of the material.

Salmon has ceased to be an article of export from Norway, not for any commercial reason, but one purely natural. The sharks have become so numerous as to drive the salmon from its haunts. The hardy Norwegians, in turn, have commenced war on its enemies, and twenty thousand sharks are now annually taken for their oil.

A new mineral water has been invented in England, called the Carrara, of which lime is the basis.

Professor Ansted, of Cambridge and King's College, London, has published a work on the subject of Geology as a branch of education. He treats it in a popular manner, as it ever should be treated to benefit the public. One of the faults we have to find with Geology at present, as a science, is the complexity of its recent arrangements, the confusion of its nomenclature, and the adoption of the peculiarities of localities, as the basis of a universal system. The new terms introduced are such as are clearly intelligible only to men of education. Mr. Ansted's work, so far as it goes, is arranged under the general heads of Descriptive, Practical, and Physical Geology. We find an extract under the first head, which we think it well to republish in a condensed shape:

COAL MEASURES.

The great New Castle coal field, in England, is partly covered up by magnesian limestone in Durham, and is worked through it. It contains thirty seams of coal, with a total thickness of ten yards, alternating with shale and sandstone, and greatly disturbed by faults and dykes. It is thought to possess more bitumen, and be more useful, economically, than any other known variety.

The Lancashire coal field is of large extent, and is connected with that of Yorkshire. It is a sort of cabinet in itself, as it contains the most perfect series of the rocks of its period, any where to be found. It consists of sandy beds and shales, alternating with a large number of coal seams, seventy-five of which, being 150 feet in thickness, are already described. In its upper part occurs a pale blue limestone of fresh water origin, which is again met in other coal fields, a hundred miles distant.

The South Staffordshire coal field is remarkable as being the only representative of the carboniferous rock in that part of England. The millstone grit is absent, and it exhibits a preponderance of shale. The seams are only eleven in number, but are unusually thick—one of them alone being thirty feet through.

The South Welsh coal field contains a thickness of about ninety-five feet of coal, distributed in nearly one hundred seams, one of which is nine feet thick. The shales and sandstones are of very great thickness, and ironstone ore abounds. The coal is what we term Anthracite. And here we may remark, that a son of Dr. Nott, of Union College, went to England some years ago with the patent stove of the Doctor, in the expectation of introducing this Welsh coal into use, but only partially succeeded. Mr. Lyell, in his recent book of travels, after seeing the immense supplies of the Anthracite in the United States, seems to favour the idea of its being employed in England, in order to avoid the dirt and soot which prevail in the large towns of that country. The mammoth steamer Great Britain used a large quantity of the Welsh coal on her passage to this country. The coal basin of Clyde, in Scotland, contains eighty-four strata of the mineral, rather thin, however, separately, though together, estimated by Ansted to be several thousand feet. The old red sandstone is the general base of the coal strata, thick sandstones occasionally containing coal, taking the place of the lower carboniferous limestone. Thin beds of limestone then succeed, and on these rest the coal strata, including seams of ironstone ore of great value.

The coal fields in Ireland are unimportant, and have been little worked. The principal one is in Leinster, and a smaller one exists in Tyrone.

France and Belgium contain a considerable number of coal fields, but they are small, and are not estimated as a national resource. In Belgium the strata lie at a considerable angle to the horizon, and are not easily worked.

Some valuable coal mines have been recently found in Russia, both bituminous and anthracite.

As appropriate to this subject, we may remark, that the report made to the Secretary of the Navy, by Professor Johnson, on the evaporating power and variety of American coal, has attracted considerable attention in England.

After looking carefully through our files, we see nothing to quote in relation to the subject of iron, except what we have already given, save the following:

Extensive new iron works are erecting in Ayrshire and Renfrewshire, Scotland, and the old works are adding largely to their number of furnaces. It is estimated that the increase of the annual quantity of pig iron smelted in that country, for the year 1845, is 37 and 4-10 per cwt. It is thought that during the year to come the production of iron will be in the same ratio.

The iron trade is evidently increasing in England. In 1840 it amounted to 1,500,000 tons.

LITERARY.

We perceive that a French critic, in the "Révue des deux Mondes," of the name of Chasles, has been attacking our institutions. Our poets he describes as servile and barren imitators, "les réflets décolorés de la Métropole; les échos affaiblis de la nationalité Britannique." We presume we shall survive this and similar remarks of Mons. Chasles. The "London Gentleman's Magazine" devotes an article to the exposure of this person's ignorance of the subjects on which he treats.

In the "Metropolitan" we find an interesting article, entitled, "Pencillings of Boston," by an American, which will, no doubt, find its way into the papers.

Bentley advertises the "Diary of Sir Simonds d'Ewes, Bart.," during the reigns of James I. and Charles I.

"Life in Denmark," from the German, by Mary Howitt.

The concluding volumes of Walpole's "Memoirs of the Reign of George III."

"Sketches on the Shores of the Caspian," by W. R. Holmes.

"Biographical and Literary Miscellanies," a new work, by our countryman, Prescott.

"The Lady of Milan," a romance,by Mrs. Thomson.

"Homes and Haunts of the English Poets," by William Howitt: and

"The World of Wonders," by Albany Poyntz.

The "New Monthly Magazine," under the editorial supervision of Mr. Ainsworth, is quite improved. Some of the most eminent writers in England are to be regular contributors to this periodical. Capt. Marryat gives a fictitious log of a privateer a hundred years ago, which puts us much in mind of the old-fashioned romances of Daniel De Foe. Mr. G. P. R. James commences a story, with the title of "Beauchamp, or the Error," which resembles in its incidents, thus far, some of Scott's romances. A pleasant article, "Jacob Omnium, M. P.," contains a hit at the repudiators of the planting States, which, we trust, will have its effect, as we really think Sydney Smith's jokes had on Pennsylvania. The wit was relished so keenly, and there were so many to appreciate it in that wealthy and patriotic State, we do not doubt the reverend gentleman's jibes "pricked the sides of their intent."

There is preparation making for the publication of the "History and Statistics of the Jews in England," from the time they came to that country down to the present day.

At the late meeting of the British Association at the Sub-section, Ethnology, Mr. Everett, our then Minister to England, made some interesting and scholarlike remarks on the Ethnography of the American languages.

The Government of Tuscany has authorized the erection of a central establishment in Florence, to hold a book fair once a year, in imitation of that of Leipsic.

Signor Devit, a Professor of Padua, has discovered, in the library of his college, an ancient M.S., containing a set of unpublished maxims by Varro, the friend and client of Cicero.

Mignet, the French historian, has been writing a "Narrative of an Incident in Spanish History, in the time of Philip II.," which, it is said, will be intensely interesting.

A beautiful Model of the Moon, as seen under a high power of Fraunhofer, the work of a Hanoverian lady, Madame Witte, is passing round among the literary circles of London.

The Count Pelet De la Lozere has published a "Glance at the History of the United States, from their colonization to the present day." It is said to be fairly written, but meagre in facts, and commonplace in its reflections.

We may shortly expect a splendid work containing an "Account of the Hydographic and Geographical Researches of the French Expedition to the Amazon River, in the government brig Boulonnaise, after thirty-seven months' absence."

But our limits are already exceeded, and we regret to say, that if we had room we should have extended this article at least a dozen pages. Of the "United Service Journal," "Blackwood," "Frazer," the "Dublin University Magazine," and the "Edinburgh," we are not able, for this cause, to present our intended notice.

In concluding this part of our resumé, however, we must observe that the "Edinburgh Review," in its great article on the "Vestiges of Creation," has come up to its highest standard in its best days. It is very easy for a critic to read a book, or even a single article, and if he possesses intellect he may make something of a show, even if his information is exclusively derived from the article itself. This is a very common artifice with men who would pass for scholars. The review in the "Edinburgh is, however, written by a man who is profoundly and thoroughly learned, and who is master of the subjects on which he treats. Not a vestige is left of the "Vestiges," and the bold attempt of a specious and half learned philosopher to overturn the established truths of nature and revelation, has met with a signal, decisive, and irremediable defeat.

FINE ARTS.

The death of Andrew Picken, Esq., at the early age of thirty, has caused much regret in England. He was an artist of great promise.

The Cartoon and Fresco Exhibition, at Wesminster Hall, under the patronage of the government, has been very successful in all respects.

M. Lamartine, the poet and statesman, lately gave a dinner, at his residence at Monceaux, to 400 persons, at which Liszt, the pianist, was present. This dinner caused some sensation, as it was considered a tribute to the arts by an artist.

Charles Lis, the oldest of the Belgian musical composers, has recently died. He is the author of the celebrated "Portrait Charmant," known wherever a barrel organ has been heard.

Many valuable works of art are now in progress in Paris, on which, at this time, we have no room for comment.

The merits of Halévy and Mayerbeer, as composers of operas, are somewhat the subject of discussion among musical critics. We must not forget to notice, here, the death of Mr. Augustine Wade, an English composer of merit

The fine arts are to have a new ally, in a substance recently manufactured at Saint Etienne, which is no more nor less than malleable glass. It is called Silicon, is white, sonorous, brilliant, and transparent. It can be coloured to any required tint. It is hard, tough, and possesses the qualities of molten steel. Articles made of this substance are prepared for public exhibition, and our readers shall be duly informed of the result.

Associations for the promotion of the fine arts appear to be starting up in every part of Europe.

Vieux Temps, who was in this country, has been summoned, with other musical artists, to Prussia, to entertain the Queen of England.

At Pottsdam a singular exhibition has been witnessed. A musical society came down the Havel, in illuminated gondolas, with the sound of trumpet. Arriving at the Church of St. Peter and St. Paul, they sang several Latin hymns, and performed Haydn's Imperial Mass.

Sculpture, painting, music, and dancing, seem never to have had more votaries than at present, and, by the singular affinity which is found in the fine arts, we see them supporting each other, and shining with a reflex brilliancy.

NOTICES OF NEW BOOKS.

Travels in North America in the years 1841-2, *with Geological Observations on the United States, Canada, and Nova Scotia, by Charles Lyell, Esq., F. R. S., author of the Principles of Geology. Two volumes in one.* New York: Wiley & Putnam, 161 Broadway. 1845.

We know not when we have had such a treat, as in the perusal of this work, which gives such valuable information on the Geology of the United States. The frontispiece, which is an elegant engraving of the bird's-eye view taken of the Falls of Niagara and the adjacent country, coloured geologically, is very interesting indeed; and Mr. Lyell's remarks upon the Geology of the Falls itself, is still more so.

In speaking of its retrogression, he makes the following remarks, which, as he afterwards says, "the Geologist may muse and speculate upon until filled with awe and admiration," for they comprehend a vastness which it is difficult properly to appreciate. The remarks are as follows:

"But however much we may enlarge our ideas of the time which has elapsed since the Niagara began to drain the waters of the upper lakes, we have seen this period was one only of a series, all belonging to the present zoological epoch; or that in which the living testacious fauna, whether fresh water, or marine, had already come into being. If such events can take place, while the Zoology of the earth remains almost stationary and unaltered, what ages may not be comprehended in those successive tertiary periods during which the Flora and Fauna of the globe have been almost entirely changed! Yet how subordinate a place in the long calendar of geological chronology do the successive tertiary periods themselves occupy! How much more enormous a duration must we assign to many antecedent revolutions of the earth and its inhabitants! No analogy can be found in the natural world to the immense scale of these divisions of past time, unless we contemplate the celestial spaces which have been measured by the astronomer. Some of the nearest of these within the limits of the Solar System, as, for example, the orbits of the planets, are reckoned by hundreds of millions of miles, which the imagination in vain endeavors to grasp. Yet one of these spaces, such as the diameter of the Earth's orbit is regarded as a mere unit, a mere infinite decimal fraction of the distance which separates our sun from the nearest fixed star. By pursuing still further the same investigations, we learn that there are luminous clouds scarcely distinguishable by the naked eye, but resolvable by the telescope into clusters of stars, which are so much more remote, that the interval between our Sun and Sirius, may be but a fraction of this large distance. To regions of space of this higher order in point of magnitude, we may probably compare such an interval of time as that which divides the human epoch from the origin of the croalline limestone over which the Nigara is precipitated at the Falls. Many have been the successive revolutions in organic life, and many the vicissitudes in the physical geography of the globe, and often has sea been converted into land and land into sea, since that rock was formed. The Alps, the Pyrenees, the Himalaya, have not only begun to exist as lofty mountains, but the solid materials of which they are composed, have been slowly elaborated beneath the sea within the stupendous interval of the ages here alluded to."

There are many other extracts which could be made of deep, deep, interest; but we have already occupied too much space, and can only say further, that this book is beautifully got up, with many plates and etchings, and is filled with matter for the most serious reflection,

Wherever the author speaks of our people or our country, he does so with candor and enlarged liberality, and we should think no intelligent citizen would be satisfied without a careful perusal of this work.

A Cyclopedia of several thousand practical receipts and collateral information, in the arts, manufactures, and trades, including medicine, pharmacy, and domestic economy—digested as a compendious book of reference, for the Manufacturer, Tradesman, Amateur, and for heads of families, by Arnold James Cooley. Illustrated with numerous engravings. New York: D. Appleton, & Co., 200 Broadway. Philadelphia: George S. Appleton, 148 Chesnut street. Cincinnati: Henry W. Derby, & Co., 113 Main street.

This is No. 1 of a work which is to be completed in twelve numbers. It is of course arranged alphabetically, is both scientific and practical, has many valuable tables, and cuts, illustrative of the subjects upon which it treats. The present number extends a few pages into the letter B. We have carefully looked it through, and find i's selection of subjects interesting, and well treated. Doubtless it will prove a very interesing manual.

Wiley & Putnam's Library of Choice Reading. No. 15. Zschokke's Tales; by Park Godwin. This volume contains The Fool of the Nineteenth Century, Harmonius, Jack Steam, Floretta, and the New Year's Eve.

The two first are deeply interesting. Jack Steam is a satire upon official greatness Floretta, and the New Year's Eve, are very neat and well told tales. No. 16, contains Prose and Verse, by the celebrated Thomas Hood. The writings of Hood are very various. Abounding often in light humour, there is, moreover, deep feeling and excellent taste. In this very number is to be seen every variety of his really imaginative talent, and it will well repay an hour or two devoted to the wit, humour, and sarcasm, and delicate touches of mind of a higher order than is always awarded to its well-known author.

The Medici Series of Italian Prose. No. 1. The Challenge of Barletta; by Massermo D'Azeglio. Translated and edited by C. Edwards Lester. New York: Paine & Burgess, 62, John street. 1845.

It is not our intention, generally, to notice works of fiction; but we may occasionally make exceptions, for reasons satisfactory to ourselves; thus braving, as it were, the opinions of some of our critical brethren of the quill; and we think ourselves fully authorized so to do, in this case, in favour of a work exhibiting so much power as the one whose title heads this notice, more particularly as its translator and editor is an American citizen. The Challenge of Barletta is not, moreover, a mere work of fiction. It is founded on historical fact, and makes its readers acquainted with the Italian character in the early part of the 16th century, and of that of the "Borgia" family in a manner to enchain his attention and richly compensate him for the time necessary to its perusal—at least, we can speak for ourselves.

As its title intimates, it is the first number of a series, to be translated by Mr. Lester; in which we wish him great success, and think he will attain it, if the succeeding numbers are of as deep interest as "The Challenge of Barletta."

THE

NATIONAL MAGAZINE

AND

Industrial Record.

Vol. I. NEW YORK, OCTOBER, 1845. No. V.

COMMERCE,

FROM THE PEACE OF RISWICK TO THE PRESENT TIME.

We concluded the article on Commerce in our last number, to which this is a sequel, at the Peace of Riswick, (1697.) An attempt was then made to form a commercial treaty with France, but it failed, and the following are the causes assigned by Anderson for such failure. He says: "The French commissary, now sent over to England for a treaty of commerce between the two nations, found insurmountable difficulties; not only on account of the high duties laid by England on French goods, but likewise because the English, during the late long war, had learned to do without the merchandise of France, by supplying themselves mostly with the wines of Italy, Spain, and Portugal, and with the linens of Holland and Silesia. The French refugees, now also settled in England, supplied her with paper, stuffs, silks, and hats, made at home. France, moreover, on the other hand, not relaxing any of her high imposts on British manufactures, which in effect amounted to a prohibition of them, it was not, therefore, possible for France and England to conclude any tariff or treaty of commerce together *which could be advantageous to the latter, and therefore none was made*. Nevertheless, soon after the conclusion of this peace the foreign commerce of England revived, and public credit was greatly mended."

Dr. Davenant's report to the Commissioners of Accounts, in 1703, makes the exports of England £6,644,203, of which sum the exports to Holland alone were £2,417,890.

This year was also remarkable for the far-famed *Methuen Treaty with Portugal*. By this treaty the King of Portugal stipulates, "both in his own name and those of his successors, to admit forever hereafter into Portugal the woollen cloths, and the rest of the woollen manufactures of the British, as they were formerly accustomed to be till they were prohibited by the laws; upon the condition that her British Majesty shall, in her own name and that of her successors, be obliged forever hereafter to admit the wines of Portugal into Great Britain, so that no more duties shall, either in peace or war with France, be demanded on the wines of Portugal than those of France, deducting one-third part of the customs or duty; and in case of any rise of duty on Portuguese wines, then the King of Portugal may again prohibit English woollens."

Dr. Fleetwood about this time published his "Chronicon Preciosum," in which he gives the true market price of wheat and malt for sixty years.

For the first twenty years, the price of Wheat, per quarter, was........	£2	17	5½
" " " Malt, per quarter, was..........	1	12	0¼
The second twenty years, from 1666 to 1685, Wheat was.............	2	6	3¾
" " " " Malt was................	1	5	3¼
In the last twenty years, Wheat, per quarter, was....................	2	5	9¾
" " Malt, per quarter, was......................	1	5	9

In 1707 a law was made laying a duty for the advancement of the woollen manufactures; and for the dressing and dying of woollen cloths within the kingdom before exportation, a duty of five shillings was laid on every white woollen cloth exported, cloths being all of the same length.

In the year 1713 the silk manufacture had become twenty times as great as it was in 1664, and the weavers' company, of London, successfully petitioned Parliament against the ratification of the 8th and 9th articles of a treaty made with France; the ratification of which articles, says Anderson, "would, instead of our own silk manufactures, have introduced an inundation of French silks, ribbons, embroideries, &c., so that our Spitalfield and Canterbury looms would have stood still, and our profitable trade with Portugal, in woollens, been entirely lost."

To put a stop to a trade carried on by British subjects from India to Ostend, a law was passed, in 1718, that all goods shipped in India should be unladen in some English port; and this act was afterwards renewed from the first of May, 1732, to the end of the next session of Parliament.

The ministry, in 1729, used the following arguments to prove that the country was then in a thriving condition, viz: "The low interest of money, showing that it was more plenty than formerly; the price of land, having raised, from 21 to 25, 26, and even 27 years purchase; much larger sums expending, in enclosing and improving lands; great increase of jewels, plate, and other rich materials and moveables; the increased value of woollen goods exported, in 1727, exceeding the value of the six previous years £475,000, and the same increase in the exportation of coals, lead, tin, and lead ore; the like increase in foreign goods exported; and lastly, the augmentation of the tonnage, which had increased beyond what it was in the six preceding years 238,000 tons: all which latter facts are undoubted marks of increasing wealth."

In the year 1733 it was computed that no less than 800,000 quarters of corn were exported from England to France, Spain, Portugal, and Italy, for which at least one million sterling in money was paid by those nations.

In 1735 a commercial treaty was made with Russia, by which England secured the privilege of transporting any British goods through Russia to Persia, and to bring returns the same way. Accordingly, in 1741, a statute was passed for bringing raw silk from Persia through Russia, and for a considerable time large quantities of raw silk and other Persian merchandise were brought this way.

In the same year an act was passed to prevent any bank from being formed in America, upon which Anderson remarks: "This was a prudently-intended law; for as the said colonies grew greater and more populous, projects and schemes might get into their heads, which would prove very detrimental to the industry and parsimony necessary to such colonies." In 1755 an act was passed for the encouragement of the whale fishery, and in 1756, for the encouragement and regulation of British commerce and navigation in general.

The year 1757 proved to be an extremely scarce year in grain all over Europe, and the exportation of grain from England was prohibited. In 1759 a law was passed to prevent the importation of French cambrics and lawns, except for exportation. In 1763 a statute was enacted to supply the export trade to Africa with calicoes, and also a bill to regulate the general trade to Africa. In 1764 an act was passed, declaring that it was just and requisite to establish stamp duties in America, which act was repealed in 1776. In this same year an act was passed assuming the right of Great Britain to tax the American Colonies.

With this commenced the acts, on the part of Great Britain, which led to the separation of the American Colonies, and, as is well known, resulted in the declaration of their independence in 1776.

Before going into the situation of the commerce of the United States at the close of the war of our independence, we think it best here to insert a statement, which we take from Anderson, showing the imports, exports, and balances of the trade of Great Britain, from the year 1700 to 1787.

Years.	Imports.			Exports.			Excess.		
	£	s.	d.	£	s.	d.	£	s.	d.
1700	5,970,175	1	10	7,302,716	8	7	1,332,541	6	8
1701	5,869,606	9	10	7,621,053	6	5	1,751,446	16	7
1702	4,159,304	16	0	5,235,874	0	5	1,076,569	4	5
1703	4,526,596	11	1	6,644,103	6	0	2,117,506	14	11
1704	5,383,200	16	5	6,552,019	18	2	1,168,819	1	8
1705	4,031,649	14	10	5,501,677	11	2	1,470,027	16	4
1706	4,113,938	3	3	6,512,086	17	1	2,398,153	13	9
1707	5,274,055	10	4	6,767,178	8	6	2,493,122	18	2
1708	4,698,663	11	8	6,969,089	19	1	2,270,426	7	5
1709	4,510,593	11	8	6,627,045	17	6	2,116,452	5	9
1710	4,011,341	7	4	6,690,828	15	2	2,679,487	7	10
1711	4,685,785	17	7	6,447,170	16	3	1,761,384	18	7
1712	4,454,682	11	6	7,568,657	5	1	3,014,174	13	6
1713	5,811,077	16	6	7,352,655	12	2	1,541,577	15	8
1714	5,929,227	0	8	8,361,638	3	3	2,432,411	2	6
1715	5,640,943	16	5	7,379.409	0	8	1,738,465	4	3
1716	5,800,258	7	8	7,614,085	6	11	1,813,826	19	3
1717	6,346,768	1	6	6,147,700	2	4	2,800,932	0	10
1718	6,669,390	1	1	8,255,302	14	5	1,585,912	13	4
1719	5,367,499	8	3	7,709,528	1	7	2,342,028	13	4
1720	6,090,083	15	1	7,936,728	16	6	1,846,645	1	5
1721	5,768,510	16	7	8,681,200	17	4	2,912,690	0	9
1722	6,378,098	19	1	9,650,789	17	10	3,272,690	18	9
1723	6,505,676	6	8	9,489,811	16	7	2,984,135	9	11
1724	7,394,405	2	5	9,143,356	12	7	1,748,951	10	2
1725	7,094,708	8	6	11,352,480	11	4	4,257,772	2	10
1726	6,677,865	13	4	9,406,731	10	10	2,728,865	17	6
1727	6,798.908	4	2	9,553,043	18	3	2,754,135	14	1
1728	7,569,299	1	9	11,631,383	1	11	4,062,084	2	2
1729	7,540,620	10	5	11,475,771	16	8	3,935,151	6	3
1730	7,780,019	9	2	11,974,135	14	11	4,194,116	5	9
1731	6,991,500	3	11	11,167,380	10	6	4,175,880	6	7
1732	7,087,914	5	0	11,786,658	13	0	4,698,744	8	0
							£84,477,130	17	11

Years.	Imports.			Exports.			Excess.		
	£	s.	d.	£	s.	d.	£	s.	d.
1733	8,016,814	2	2	11,777,306	6	7	3,760,492	4	5
1734	7,095,861	8	5	11,000,645	2	2	3,904,783	13	10
1735	8,860,184	0	11	13,544,144	7	0	5,383,960	6	1
1736	7,307,966	12	10	11,616,356	10	2	4,308,389	17	4
1737	7,073,638	3	6	11,842,320	17	0	4,768,682	13	6
1738	7,438,060	4	7	12,289,495	7	1	4,850,535	2	6
1739	7,829,373	8	11	9,495,366	14	3	1,665,993	5	4
1740	6,703,778	10	6	8,869,939	15	5	2,166,161	4	11
1741	7,936,084	18	7	11,469,872	8	2	3,533,787	9	7
1742	6,866,864	13	0	11,584,427	2	4	4,717,562	9	4
1743	7,802,353	6	6	14,623,653	9	6	6,821,300	3	0
1744	6,362,971	6	6	11,429,628	10	3	5,066,657	3	9
1745	7,847,123	3	3	10,497,329	17	0	2,650,206	13	9
1746	6,205,687	15	8	11,360,792	16	2	5,155,105	0	6
1747	7,116,757	5	6	11,442,049	1	6	4,325,221	16	0
1748	8,136,408	19	6	12,351,433	12	11	4,215,024	13	5
1749	7,917,704	10	4	14,099,366	11	0	6,188,162	0	8
1750	7,772,039	12	5	15,132,004	3	1	7,359,964	10	8
1751	7,943,436	4	3	13,967,811	8	7	6,024,375	4	2
1752	7,889,369	9	3	13,221,116	3	11	5,331,746	14	8
1753	8,624,029	4	3	14,264,614	3	11	5,639,584	19	8
1754	8,093,472	15	0	13,396,853	9	7	5,303,383	14	7
1755	8,772,865	2	10	12,182,255	17	6	3,409,390	14	8
1756	7,961,603	8	10	12,517,640	8	3	4,556,036	19	5
1757	9,253,317	14	9	13,438,285	1	0	4,184,967	6	3
1758	8,415,025	4	10	15,034,994	10	7	6,619,969	5	9
1759	8,922,976	1	4	14,699,892	7	1	5,778,916	5	9
1760	9,832,802	11	1	15,579,073	0	5	5,746,270	9	4
1761	9,543,901	14	4	16,365,953	0	7	6,822,051	6	3
1762	8,870,234	14	3	14,134,093	3	6	5,263,858	9	3
1763	11,665,036	0	9	16,160,181	16	3	4,495,145	15	6
1764	10,364,307	12	3	16,512,403	16	3	6,148,006	4	0
1765	10,889,742	13	10	14,550,507	1	8	3,660,764	7	10
1766	11,475,775	5	8	14,024,964	2	8	2,549,188	17	0
1767	12,073,956	0	11	13,844,511	1	8	1,770,555	0	9
1768	11,878,661	2	7	15,117,982	16	1	3,239,321	13	6
1769	11,908,560	16	5	13,438,236	6	11	1,529,675	10	6
1770	12,216,937	14	3	14,266,653	17	5	2,049,716	3	2
1771	12,821,995	16	9	17,161,146	14	2	4,339,150	17	5
1772	14,508,715	16	9	18,732.379	5	8	4,233,663	8	11
1773	12,522,643	7	0	16,654,052	5	8	4,131,408	18	8
1774	14,548,902	16	1	17,607,447	4	0	3,058,544	7	11
1775	14,815,955	17	2	16,946,523	18	4	2,129,568	1	2
1776	12,449,189	17	11	15,685,107	16	7	3,235,918	18	8
1777	12,643,834	7	8	14,152,243	6	1	1,508,408	18	5
1778	10,975,533	1	0	12,375,712	12	11	1,400,179	11	11
1779	11,435,263	13	5	13,597,771	4	2	2,162,507	10	5
1780	11,714,967	7	11	13,689,073	12	6	1,974,105	4	7
1781*	12,720,613	16	1	11,470,388	14	8	*1,253,235	1	3
1782	10,341,628	15	6	13,224,637	10	11	2,883,008	15	9
1783	13,122,235	7	6	15,450,778	12	9	2,328,543	5	5
1784*	15,272,802	0	4	14,961,074	11	9	*311,727	8	3
1785	16,279,490	1	6	16,770,239	7	6	493,749	6	6
1786	15,786,072	7	5	16,300,730	13	5	514,658	5	0
1787	17,804,024	16	1	18,296,166	12	11	492,141	16	10
							207,409,635	6	10
Brought over,							83,477,130	17	11
							290,886,766	4	9
Deduct 1781, and 1784,							1,565,052	9	6
							£289,321,713	14	3

N. B. In those years marked with asterisks, the excess is to be understood of the imports; in all others, of the exports.

Much controversy has existed, and still exists, among writers on Political Economy, on the subject of *the balance of trade* ; some insisting that a nation which imports more in value than it exports, is a loser to that amount; and others contending that no nation can, for any length of time, import more than it exports, notwithstanding it may appear so to do by published statements of imports and exports—the apparent differences, it is contended, balance themselves. Now, without mooting this question, which to us is a very simple one, we cannot forbear the remark on this exhibit from Anderson of the immense surplus of the exports of Great Britain over her imports, that while we do not mean to urge that Great Britain was benefited to the full amount of this balance, because the exports, being stated at the official value, are much overated, while the imports are given at the declared or supposed real value ; yet we do mean to insist, that in the exportation of so heavy an amount as to leave a balance over imports of £289,321,713 15 3, which, at $4 80 per pound sterling, makes the enormous sum of $1,388,744,226 06 over and above the amount of her importation, yielding every allowance for the overrating in consequence of the use of the official value instead of the real value in the exports, Great Britain was gaining very great sums, inasmuch as she exported principally her *labour*, while she imported mostly raw materials, on which comparatively little labour had been expended; and this difference is greater at the present time than formerly, from the perfection of machinery and its immense multiplying power.

Take, for instance, her trade with the United States for the last year, when we exported to Great Britain, in raw materials, as follows, viz :

Cotton,	$39,591,351
Tobacco,	2,900,126
Rice,	246,696
Tar, pitch, and turpentine,	648,124
Pot and pearl ashes,	53,936
Skins and furs,	573,873
	$44,014,106
Exports of all other articles,	3,774,556
Total amount of exports to Great Britain for 1844–5,	$47,788,662

Now the imports from Great Britain for the same period were nearly all manufactures. The calculation is, that English cotton manufactures, exclusive of twist, none of which comes to the United States, multiply the value at least six times; but, to be within all reasonable bounds, we will take five times only. $39,591,351 multiplied by 5 gives	$197,956,755
Deduct value of raw material,	39,591,351
Amount produced in value to Great Britain on the manufacture of the amount of cotton shipped thither in 1844–5, supposing the manufactures were to be shipped to the United States or elsewhere, exclusive of twist,	$158,365,404

This surely speaks for itself, and shows the immense advantages gained by the manufacturing country, over the country that exports its raw materials. But, this is by no means all the advantages gained, for it appears Great Britain exports* more than half her cotton goods, which are

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* The following statement is taken from Porter's Progress of the British Nation, Vol. III., page 79 :

437,000,000 lbs. of cotton, taken by the manufacturers, assuming the cost and the charges of manufacture to be the same per lb. as in 1833, would amount to	£48,641,343
From which deduct the value of goods and yarn exported in 1841,	24,668,618
Amount of cotton goods consumed in Great Britain in the year 1841, less than one half the amount manufactured,	£23,972,725

therefore clear profit, while we consume every dollar of the manufactures received from her.

Of course we do not make this calculation with any further view than to show the advantages of manufactures over raw materials; far from it; we rejoice in the market thus provided for our surplus cotton, and in the employment given to our ships which carry it.

Thus far, it seems proper to advert to the table from Anderson, and the immense balance it shows in favour of Great Britain.

We return now to the state of our own country at the peace of 1783, under the Confederation. We then had "Free Trade" in its fullest operation. Our ports were open, with scarcely any duties, to the vessels and merchandise of all other nations. In Pennsylvania the duties were two and a half per cent., but these were nugatory, for Burlington, New Jersey, was a free port, and a large portion of the goods were there entered and clandestinely carried across the Delaware into Pennsylvania. From almost all nations of Europe large shipments were made to this country, and we were inundated with foreign goods. We made literally nothing for ourselves, and thus industry of every kind was paralyzed; every species of goods could be purchased much cheaper than they could be made here, and Adam Smith and Jean Baptiste Say had their theory in full operation. Such of our citizens as had embarked in any kind of manufactures were reduced to bankruptcy and ruin. Our workmen were consigned to idleness and its long train of disastrous consequences. Real property ceased to be of much, if of any value. Rents fell to almost nothing. Nor did those who embarked in mercantile pursuits share a better fate; for the people, being idle, could not pay for the goods purchased, and consequently most of the merchants failed. The following are some historical records of that period. Dr. Hugh Williamson gives the following statement: "In every part of these States, the scarcity of money has become a common subject of complaint. This does not seem to be an imaginary complaint, like that of *hard times*, of which men have complained in all ages of the world. The misfortune is general, and in many cases it is severely felt. The scarcity of money has become so great, and the difficulty of paying debts has become so common, that riots and combinations have been formed in many places, and the operations of civil government have been suspended. Goods were imported to a much greater amount than could be consumed or paid for."

In Minot's history of the insurrection in Massachusetts we have the following: "Thus was the usual means of remittance, by articles the growth of the country, almost annihilated, and little else than specie remained to answer the demands incurred by importations. The money, of course, was drawn off, and this being inadequate to the purpose of discharging the whole amount of foreign contracts, the residue was chiefly sunk by the bankruptcy of the importers. The scarcity of specie arising from this cause was attended with evident consequences; it checked commercial intercourse throughout the community, and furnished reluctant debtors with an apology for withholding their dues, both from individuals and the public. On opening our ports, an immense quantity of foreign merchandise was introduced into the country, and people were tempted, by the sudden cheapness of imported goods, and by their own wants, to purchase beyond their capacity to pay. Into this indiscretion they were in some measure beguiled by their own sanguine calculations of the value which a "free trade" would bestow on the value of their soil, and by a reliance on those evidences of the public debt which were in the hands of most of them. So extravagantly, too, did many estimate the temptation which equal liberty and vacant lands would hold out to emigrants from the old world, as to entertain the opinion that Europe was about to empty itself into America, and that the United States would derive, from that source, such an increase of population as would enhance their lands to a price not heretofore even conjectured."

"The bonds of men," says Mr. Ramsay, of South Carolina, "whose competency to pay their debts was unquestionable, could not be negotiated at a less discount than thirty, forty, and even fifty per cent. Real property was scarcely vendible, and sales of any article for ready money could be made only at a ruinous loss. The prospect of extricating the country from these embarrassments was by no means flattering; while every thing else fluctuated, some of the causes which produced this calamitous state of things were permanent. The hope and fear still remained that the debtor party would obtain the victory at the elections; and, instead of making the effort to obtain relief by industry and economy, many rested all their hopes on legislative interference. The mass of national labour, and national wealth was consequently diminished. Property, when brought to execution, sold at so low a price as frequently ruined the debtor without paying the creditor.

"A disposition to resist the laws became common; assemblies were called often, and earlier than the constitution and laws required. Laws were passed by which property of every kind was made a legal tender in the payment of debts, though payable according to contract in gold and silver. Other laws installed the debts, so that of sums already due, only a third, and afterwards only a fifth, was annually recoverable in the courts of law."

"Silver and gold," says Belknap in his history of New Hampshire, "which had circulated largely in the latter years of the war, were returning, by the usual course of trade, to those countries whence large quantities of necessary *and unnecessary* commodities had been imported. The people of New Hampshire petitioned, and to gratify them the Legislature enacted, that when any debtor shall tender to his creditor, in satisfaction of an execution for debt, either real or personal estate sufficient, the body of the debtor shall be exempt from imprisonment, and the debt shall carry an interest of six per cent., the creditor being at liberty either to receive the estate, so tendered, at a value estimated by three appraisers, or to keep alive the demand, by making out an *alias* within one year after the return of any former execution, and levying it on any estate of the debtor which he can find."

Such was the state of things under the Confederacy first formed; and while the people were thus writhing under so many complicated evils, it is not to be wondered at, that every species of ill-advised remedy should be brought forward. Accordingly, we find that emissions of paper money, legal tenders, and suspensions of the operations of courts of justice for the collection of debts, were all resorted to, but they only served further to embarrass, and create more and new difficulties. In Massachusetts the suffering and distress was greater than in any other State. Riotous assemblages of the people were common, and the proceedings of the courts of justice, according to Chief Justice Marshall, were impeded, until it finally ended in open insurrection under Shays, a revolutionary officer, which was crushed by the energy of Governor Bowdoin and his council, and the decision of Generals Lincoln and Sheppard. Some idea of the distress of the government, as well as the people, may be formed from the circumstance that, Governor Bowdoin having raised four thousand militia against the insurgents, there was not money enough in the treasury to support that small army for one week, and they could not have been marched, but for the patriotism of a number of private individuals, who subscribed the necessary funds."

At this agonizing period the minds of all men felt the total inefficiency of the Confederation, and with one accord hailed the Constitution as the only remedy. Accordingly, in 1789, that invaluable blessing was given to our distracted and distressed country, and its magical effects soon proved the consummate skill and wisdom of its framers; for no sooner was it adopted, than confidence was restored, the industry of the whole people was soon put in requisition, and a career commenced, which opened various scenes of good and evil fortune. These scenes it is our purpose to examine; not in detail, for that would greatly exceed our limits; we shall, however, use our best endeavours to touch every period that was marked with any important commercial change, and trace the history of our commerce, up to the present period, as connected with those nations with whom we principally trade, endeavouring at the same time to show the causes which have led to our present position respecting them.

In approaching this subject, after the adoption, in 1789, of our present Constitution, we feel the impossibility, for want of space, to do any thing bordering upon that justice which a subject of such importance demands. We shall necessarily, therefore, omit at this time to comment upon many parts of it to which we much wish to call public attention, and on which it is our intention so to do in our future numbers. For the present we must content ourselves with the general outlines, as we have previously done with the commerce of Great Britain, and in that view, shall merely examine the course of trade, to prove, what we commenced this article to make fully manifest, namely, not only that trade will not regulate itself, but that it requires great wisdom to secure to ourselves the advantages to which we are entitled; and further, that this wisdom has not always been shown by those who have legislated for this country. But for the present we return to our narrative, which we left at the period of the adoption of the Constitution.

We have stated that this auspicious event was hailed with acclamations of joy; and one great reason of this joy was, because among other important powers vested in the general government, was *that* "to lay and collect taxes, duties, imposts, and excises, and to regulate commerce with foreign nations, among the several States, and with the Indian tribes."

Among the first acts passed at the first session of the first Congress, was an act laying duties upon the importation of foreign goods, the preamble to which says, "Whereas it is necessary for the support of government, *and the encouragement and protection of manufactures*, that duties be laid on foreign goods and merchandise," &c., &c.

Another act was passed, at the session of 1790, upon the representation of the Legislature of Massachusetts, urging the languishing state of the cod fishery upon the banks of Newfoundland, and asking the fostering care of Congress; whereupon it was enacted that a bounty be allowed on the exportation of salt fish, equivalent to the duty upon the imported salt used in its preservation; and afterwards an allowance was made in money, at a certain rate per ton, to vessels employed for a certain number of months in this fishery, which greatly increased the tonnage employed in it. But Great Britain soon became jealous of our success, seized some of our vessels engaged in it, and the matter was not finally settled till 1818, when a convention established our right to it.

These two acts, the one establishing the power and right in Congress to protect our manufactures and trade, and the other carrying out that right, by granting a drawback upon the exportation of salted fish, and a bounty in money upon the vessels engaged in the cod fishery, contributed greatly to enhance the value of the new Constitution in the estimation of the people, as the whole country had suffered so much for want of that power in the Articles of Confederation. Thus a general feeling of joy was felt at the opening prospect of a new and extensive impetus to commerce and the general industry of the Union.

The foreign commerce of the United States was commencing to experience the benefit of this new order of things, and gradually increasing, when, in 1793, broke out the wars incident to the French revolution, which soon involved the nations of Europe in a general war. The immense maritime supremacy of Great Britain so much impeded the intercourse of the other belligerent European nations with their colonies, that it became impossible for them to carry it on themselves, and the carrying trade naturally fell into our hands, as the only important neutral power.

Our proximity to the West India islands gave us great facilities for exporting their produce to the mother countries, and accordingly we seized upon the proffered boon, and entered largely into this trade. The immense armies which were raised on the European continent in the course of these wars, greatly enhanced the price of all kinds of produce for their subsistence, and thus opened a most profitable market for our agricultural products. These new circumstances in the commercial world, soon produced their effects upon this country to an enormous extent, to the great increase of our tonnage, and to the awakening of a spirit of enterprise which knew scarcely any bounds.

Our registered tonnage, which in 1789 was only 123,893 tons, in 1790 rose to 346,254, and in 1810 had reached the enormous amount for that period, and in the short space of ten years, of 984,269 tons; while our exports, which in 1791 were $19,012,041, had, in the same period, up to 1810, increased to $66,757,970, of which $42,366,675 were of foreign articles, and only $24,391,295 of domestic produce—this latter, however, having increased, since 1803, from $13,594,072 to that amount, no account of our exports having been officially reported before 1803.

No combination of circumstances had ever before occurred to enable any country suddenly to leap, as it were, into such an enormous trade, and great were the immediate profits resulting from it. The editor can make this record in perfect good faith, and bears his testimony from a personal acquaintance with it. There may be said to have been, literally, little else done in the country, during the period under review, but the exportation of the grain and provisions afforded by our agriculture, and the carrying of colonial produce from the colonies to Europe. Nor was this limited to the West India colonies, for vast quantities of produce were taken in American ships from the French and

Dutch colonies to the eastward of the Cape of Good Hope, and even from China to the European Continent.

Let it not, however, be forgotten that this trade had its disasters, which were indeed very great. The jealousies of the belligerents were greatly excited, and England, France, Spain, and Naples, let loose their public and private armed ships upon us, and the American vessels captured numbered above two thousand in all.

The following is a list, as near as we can ascertain, of the number of American vessels, with their cargoes, captured during the wars incident to the French Revolution, as reported to Congress on the 6th July, 1812.

We have added 615 to the number taken by the French, prior to the year 1800, which we have obtained from a large claimant on account of the depredations then committed. It will be seen that the Congressional list does not enumerate these vessels, as that contains no account of vessels taken before 1803.

We have taken much pains to ascertain the number of vessels condemned in Holland, and also those taken by the Spanish, but without effect. Dr. Seybert, also, in his statistics, says, "For want of information, the captures made by Spain could not be reported." Neither is any account of their number or amount given in Pitkin's statistics: both of these books are before us, and, although they both notice the enormous amount of depredations committed, neither of them contains any thing further than the report to Congress, presented below.

List of Vessels captured during the wars incident to the French Revolution, as reported to Congress on the 6*th of July,* 1812:

British Captures.	Vessels taken.
1803,	20
1804,	39
1805,	116
1806,	131
1807,	194
Period of capture not ascertained,..	28
Taken antecedent to orders in council	528
1807, subsequent to " "	62
1808,	108
1809,	45
1810,	55
1811,	79
1812,	24
Time of capture not ascertained,...	16
Total British captures,.....	917
Captures and seizures made by the Neapolitans,	47
Spain, number not ascertained.	

French Captures.	Vessels taken.
1803,	17
1804,	90
1805,	64
1806,	23
Time of capture not known,.......	12
Previous to Berlin and Milan decrees,	206
Captures during the existence of Berlin and Milan decrees,	307
Captures made after the revocation of decrees.	
1810,	6
1811,	29
1812,	7
Period not known,	3
	558
British captures,	917
Captures made by the Danes,......	70
Neapolitans,	47
	1,592
Seizures in Holland, am't not ascertained.	

RECAPITULATION.

Total British captures,		917
" French captures,	558	
Prior to 1800, as above,	615	1,173
Neapolitan captures,		47
Danish captures,		70
		2,207

By a statement published in Boston, in 1834, by John Howard, of that city, entitled "The prices of forty articles for forty years," the number of captures from 1803 to 1812 is stated to be 1,592 vessels, precisely the number contained in the above report to Congress. Of these 1,592, the Boston article states that 915 vessels and their cargoes were condemned.

Now, if to these we add the number condemned as stated by the claimant on behalf of those captured previous to 1800, not contained in the report to Congress as above stated; the number of vessels and cargoes actually condemned, without the Spanish captures and those seized in port in Holland and other European ports, then, will stand as follows:

Vessels reported to Congress as captured subsequent to 1803, condemned,..	900
Condemned in France prior to 1803,.......	615
Total number of American vessels condemned, exclusive of those captured by the Spanish and of seizures in port, during the wars incident to the French Revolution,..	1,512

We have no means of ascertaining the amount of property lost to the United States by this unlawful depredation upon her commerce, but think the estimate of seventy to eighty millions of dollars not extravagant, knowing, as we do, that the amount of property taken by the Spaniards was very great, as well as the amount seized in port, all over continental Europe, about this time.

In this manner things went on with our commerce, until, after a short skirmish on the ocean with France, the aggressions of the British in impressing our seamen, thereby adding insult to injury, finally ended in embargo, non-intercourse, and the war of 1812.

This sketch, imperfect in detail as it of necessity is admitted to be, nevertheless shows the uncertainty of the prosperity which arises from a commerce not founded upon the solid basis of a well-protected and permanent domestic industry, but liable to the fluctuations of a foreign demand based upon war.

Our grain and provisions, it is true, commanded very high prices, and our ship owners received enormous freights; but these engendered habits of much extravagance in our expenditures, and tended greatly to an unsettled state of things, which, in the end, produced the war and all its expenses and concomitant evils; the immense losses by the seizure and condemnation of our property abroad; and moreover, at the peace in 1815, the country experienced, in a return to its own proper share of commerce, a scene of distress which it is difficult to describe in a manner to do it justice.

The war found us destitute of the means of all future supplies of the most common necessaries for clothing; our soldiers were almost without clothes or blankets.

Such a state of things, in this respect, as then existed, it is difficult at this time to realize. Every article of foreign manufacture rose to an enormous price, which stimulated our citizens; and many of our merchants, whose business was curtailed or destroyed by the war, embarked in manufacturing with great energy and enterprise. Many millions of dollars were invested in them, and having the domestic market secured to them, they succeeded to a very great extent.

Unaided by any expenditure on the part of the government, an advance in the manufacturing processes was attained, which had required centuries to England and France, and cost enormous sums in bounties. The supply became nearly commensurate with the demand, and no one doubted that the government and nation would sustain and protect them on the return of peace.

Of course our exports fell off largely, for in 1813 and 1814 they were but about $31,000,000 or $15,000,000 for each year. Hostile fleets and armies desolated some parts of our country, but the energies of the people being aroused, the nation made no small advancement in prosperity. The all-creating influence of the home industry soon showed forth its power. The labour of the country found full employment and compensation. Even the farmers obtained good prices throughout the war. By a price current of the period, we find that, August 23rd, 1813, flour was $8 25 per barrel, and on the 22nd of November, in the same year, it was $10 per barrel. In 1814, in January 31st, it was $8; July 4th, $7 00; December 5th, $8 25. Beef, during the same period, from $15 to $19 per barrel.

By a statement made at that time in the public prints, the estimate of persons employed in the various manufactures was as follows:

In the cotton business,	2,325	persons.
In the woollen business,	1,226	"
In iron castings,	1,152	"
In paper making,	950	"
In smithery,	750	"
Total,	6,403	"

Pittsburgh, Pennsylvania, had grown up into considerable importance. It was said 1,960 persons were employed then in manufactures, and that articles to an amount of $2,617,833 dollars were manufactured in 1815.

The close of the war found the country prosperously engaged. Large cotton and woollen establishments had grown up, and upwards of $50,000,000 had been invested in them, exclusive of many other handicraft professions spread over the country.

The peace, which was everywhere celebrated by rejoicings and illuminations, did not, however, produce the beneficial results which had been anticipated from it. The double duties which had been laid on, expired, by their own limitation, in one year after the close of the war—and a new tariff was adopted, ranging from 15 to 30 per cent. ad valorem.

These rates of duty proved wholly ineffectual to the protection of our manufacturers, and they, of course, fell into ruin, and the country was inundated with foreign manufactures.

Our exports from 1812 to 1817 inclusive, were as follows:

Year.	Domestic Exports.	Foreign Exports.	Total Exports.
1812	$30,132,109	$8,495,127	$38,527,236
1813	25,008,152	2,847,845	27,855,997
1814	6,782,272	145,169	6,927,441
1815	45,974,403	6,583,350	52,557,763
1816	64,781,896	17,138,555	81,920,452
1817	68,313,500	19,358,069	87,671,569

The immense disparity between our exports and imports in the year 1815, inundating the country with the products of foreign labour, did not fail to produce the most disastrous effects. The following list of imports, from 1815 to 1817 inclusive, we take from Pitkin's Statistics, page 176.

1815	$83,080,073
1816	155,302,700
1817	98,758,373

It will readily be seen, from these immense importations, that the home market for our manufactures was wholly destroyed, and that they were, of course, involved in utter ruin.

This, in itself, would have been sufficiently disastrous, but its effects throughout the whole country were such as would scarcely be believed, had we not the most satisfactory evidence to produce in public documents, the validity of which do not admit of a doubt. The evils did not manifest themselves, to their full effect, till about the year 1819, when pay day came round, and when the surfeit was complete. The foreign goods had been by this time generally diffused throughout the country, and we shall now show the effect produced. The following is an extract from a report made to the Legislature of Pennsylvania, at their session of 1819–20, by committees appointed to investigate the cause of the deep distress which prevailed throughout that State. They thus depict its situation.

"Forced sales of merchandise, household goods, farming stock and utensils, at prices far below the cost of production, by which numerous families have been deprived of the common necessaries of life and of the implements of their trade. A general suspension of labour, the only legitimate source of wealth, by which thousands of our most useful citizens are rendered destitute of the means of support, and are reduced to the extremity of misery and despair.

"Ruinous sacrifices of landed property at sheriffs' sales, whereby, in many cases, lands and houses have been sold at less than a half, a third, or a fourth part of their value, thereby depriving of their homes, and of the fruits of laborious years, a vast number of industrious farmers, some of whom have been driven to seek, in the uncultivated wilds of the west, that shelter of which they have been deprived in their native State.

"An almost entire cessation of the usual circulation of commodities, and a consequent stagnation of business, which is limited to the mere purchase and sale of the necessaries of life, and of such articles of consumption as are absolutely required by the season.

"An universal suspension of all large manufacturing operations, by which, in addition to the dismissal of the numerous productive labourers heretofore employed therein, the public loses the revenue of the capital invested in machinery and buildings.

"The overflowing of our prisons with insolvent debtors, most of whom are confined for small sums, whereby the community loses a portion of its active labour, and is compelled to support families by charity who have thus been deprived of their protectors."

The public revenue, which in 1816 had amounted to $36,306,874, had fallen to $15,005,612, so that commerce languished equally with all other pursuits. The committee of commerce and manufactures in Congress stated in one of their reports, that "In profound peace, without any national calamity, the country became embarrassed with debts, real estate was under a rapid depreciation, the markets of agriculture and pursuits of manufactures were diminished and declining, and commerce was struggling, not to retain the carrying of other countries, but our own—there is no national interest in a healthful, thriving condition. The nation at large is suffering. The operations of government and of individuals alike laboured under difficulties which were felt by all."

We could adduce abundance of such evidence from other sources, but we presume this is amply sufficient for our purpose.

But it was not only on this side of the water that American interests suffered; a sad and awful downfall took place in Europe of our great staple of cotton.

We annex a list of prices of that article, from 1816 to 1822, in the Liverpool market:

1816,.............	17½d to 20½d	1820,.............	9d to 11¼d
1817,.............	18½d to 22½d	1821,.............	7¾d to 10d
1818,.............	17d to 20d	1822,.............	6½d
1819,.............	12¼d to 14d		

These immense importations, and the great fall in the price of cotton, had another very serious effect upon us, in the immense exportations of specie which took place in 1822. We have before us a statement, furnished by the Secretary of the Treasury, of the exports and imports for the three last quarters of that year, in which the balance of exports over imports in these three quarters, of gold and silver coin, *amounts to the enormous sum of twelve millions eight hundred thirty three thousand six hundred and ninety-two dollars.*

This caused the necessity of a great curtailment of bank paper, the interest of money rose to two, and in some places two and an half per cent. per month, and caused great commercial distress, and an appalling number of mercantile failures in the Atlantic cities. In Boston, it was publicly stated that one hundred houses had failed, involving the sum of three or four millions of dollars; and although we have no exact record of the number or amount of the failures which took place in other cities, the mercantile embarrassments were very great.

We need not dwell upon this distressing period; many of our readers will well recollect it.

The tariff of 1816, though it adopted the square yard duty, proved wholly inadequate to the just protection of our manufactures generally. It was followed by the revision of the duties by the act of 1824; but it was not until 1828 and 1830 that proper tariffs were passed. The discontents of the South produced the act of enforcement, which was christened by them the bloody bill, and great was the agitation throughout the country. South Carolina resorted to nullification, some of our wisest statesmen thought the Union in danger of dissolution, and the compromise tariff of 1832 was adopted.

This law, it is well known, was upon the principle of a gradual reduction in the scale of duties, which in 1842 were not to exceed twenty per cent. on any one article, on a home valuation.

When the period fixed for the new mode of assessing duties came round, in 1842, the reduction of the duties had produced its usual disastrous effects upon the country; the home valuation was found impracticable, and a state of things had arisen, which threatened another, and wide extended ruin.

Public and private confidence was almost annihilated. The government were without funds to meet its current demands. The stocks for loans authorized by Congress could not be disposed of, either at home or abroad, and not until the enactment of the tariff of 1842 were any hopes entertained of a revival of trade. The moment, however, that act had received the signature of the President and became a law, it operated like magic! every manufacture began to revive, and this revival of the internal industry was not long in producing its beneficial effects upon the currency and our foreign commerce. Confidence soon became restored, and we are now, three years after its enactment, experiencing its blessings.

We are fully aware, that, in this article, from want of space, we have omitted much that would have strengthened our position, and our readers cannot regret this omission more than we do ourselves.

We therefore respectfully ask them to have patience with us, and they shall hear further from us. We have somewhat to say in future upon the fluctuation of values, the besetting evil of all commercial countries, but more particularly of this. The consideration of this all-important subject is closely connected with the expansion and contraction of our paper currency, and some other less important items. It is our purpose, on some future occasion, to state facts in connexion with this matter. Our present object has been to show the actual state of our commerce and home industry, as connected with each other, from the first period of our history as an independent nation, and also the influence which the legislation of other countries, and of England in particular, has exercised upon it.

We are aware that in the intricacies of the vast concerns of a country like ours, many causes unite and contribute to embarrass trade and commerce, but we think the facts contained in this article tend to establish the indisputable truth, that nothing can retard the prosperity and success of a free and industrious nation, in its rapid advancement, *but a neglect to foster and protect its own labour.*

To show this more fully, and to prove what we advanced at the beginning of our article on commerce in our last number, namely, that a flourishing commerce and a protected industry are inseparable, we annex a table, which we have compiled with great care from official documents from the Treasury department, containing every item of our imports and exports comprising our trade for the last year with Great Britain. By which it will be seen, that, under our present wise protective system, our exports more than counterbalance our imports—thus preventing, to any great extent, the exportation of specie, which, as we have already seen, unsettles the currency, and leads to the most disastrous consequences.

An examination of this table of imports will establish another fact, which is by no means unimportant, namely, that a protected industry enables the country to pay for, and consume foreign manufactures, upon a liberal scale.

The amount of $39,537,879, is no small sum to consume, of *British* manufactures, in one year. And it may be consolitary to those cotton growers, and others, who have always asserted that the tariff greatly curtailed importations, to know that this nearly equals the whole amount of the cotton exported during the same period, which will be seen to have amounted to $39,591,351, while all the rest of our farming exports, combined, only amount to $8,202,773; and if from that, we deduct the tobacco and rice, together making $3,146,822, there will remain for all the rest of our agricultural population out of the planting States, but the bare pittance of $5,055,951. On this we shall make no comment; it speaks plainly enough for itself. The Northern farmer cannot even exchange his raw produce for British manufactures, so that he is actually worse off than when we were colonies of Great Britain, for then he was allowed that *great privilege*, which now is denied him. Who has the best right to complain?

Direct Trade between England, Ireland, and Scotland, and the United States, for the year ending 30th June, 1845.

IMPORTS.

MANUFACTURES.			
Woollens and carpeting,		$7,043,914	
Cotton goods of all kinds,		12,074,876	
Flaxen goods,		4,144,391	
Hempen goods,		389,964	
Sail duck,		166,924	
Cotton bagging,		144,421	
Cordage, twine, seines,		100,344	
Floor cloths and oil cloths,		25,734	
Silks,		1,576,649	
Silk and worsted,		367,760	
Ready made clothing and articles of wear,		420,663	
Goats hair camblets,		29,623	
Grass cloth and carpeting,		15,063	
Matting and mats,		942	
Straw and chip hats and bonnets,		81,675	
Manufactures of leather,		102,440	
Hair cloth and seating,		25,015	
Gold and silver lace,		3,008	
Manufactures of glass,		25,889	
Earthen and stone ware,		1,522,167	
Manufactures of gold and silver,		17,431	
Jewelry,		21,099	
Plated and gilt ware,		106,969	
Jappaned ware,		25,755	
Chronometers and clocks,		3,952	
Watches and parts of watches,		174,755	
Buttons,		36,851	
Lead pencils,		8,842	
Quills,		1,846	
Brushes,		3,034	
Slates, school,		69,373	
Hats, caps, and muffs,		5,804	
Patent sheathing metal,		7,567	
Manufactures of copper and brass, pigs, bolts, and sheets, duty free,	$847,464		
Other manufactures of,	72,816—	920,464	
Pins,		42,468	
Fire and side arms,		59,268	
Saddlery,		161,981	
Manufactures of tin,		12,781	
Other metals,		4,018	
Iron and steel,	$1,778.815		
Manufactures of,	2,958,313—	4,737,128	
Paper,		23,810	
Books,		140,571	
Salt,		717,846	
Gunpowder,		2,790—	$28,737,173

Bleaching powders,		109,475	
Glue,		751	
Ivory black,		1,398	
Linseed oil,		119,122	
Beer, ale, and porter,		122,516	
Distilled spirits and cordials,		21,272	
Refined sugar,		67,369	
Saltpetre,		21,232	
White and red lead,		11,272	
Ochre,		5,430	
Non-enumerated articles—			
Dutiable,	$3,191,618		
Free,	281,363—	3,472,981	
Sundry small articles,		17,146	
		10,800,706	
Brought over,		28,737,173—	$39,537,879
MISCELLANEOUS.			
Opium,		7,062	
Cigars,		1,345	
Potatoes,		14,662	
Fish,		273	
Cheese,		1,411	
Beef, pork, and bacon,		390	
Pearl barley,		66	
Brandy,		68,340	
Wines,		39,212	
Brimstone,		256	
Bullion and specie,		1,139,219	
Molasses and brown sugar,		10,709	
Almonds,		2,927	
Currants,		8,549	
Figs,		4,878	
Nuts,		8,790	
Mace and nutmegs,		9,600	
Cinnamon and cloves,		7,742	
Pepper and pimento,		7,548	
Ginger,		1,494	
Camphor,		51,024—	1,385,429
RAW MATERIALS.			
Furs,		325,714	
Zinc, in plates,		46,934	
Quicksilver,		72,513	
Wool,		67,545	
Goats wool,		8,068	
Rags,		94,638	
Flax,		35,268	
Woad for dying,		328,585	
Bristles,		27,448	
Coal,		116,578	
Dye woods, and barrilla,		9,544	
Indigo for dying,		328,558—	1,068,096
Total amount of trade with Great Britain,			$41,991,404

EXPORTS

From the United States, to England, Ireland, and Scotland.

Oil, spermaceti,	$222,441
Whale, and other fish oil,	133,687
Fish,	7
Whalebone,	36,873
Spermaceti candles,	810
Staves, shingles, boards, plank, and scantling,	9,171
Other lumber,	656,539
Oak bark, and other dye,	22,631
Manufactures of wood,	31,380
Tar, pitch, rosin, and turpentine,	648,124

Pot and pearl ashes,	53,936
Skins and furs,	573,873
Beef, tallow, hides, and horned cattle,	777,906
Pork, hams and bacon, lard, and hogs,	643 705
Butter and cheese,	336,647
Wheat,	20,160
Flour,	745,436
Indian corn and meal,	38,534
Other grain, rye, &c.,	8,996
Biscuit, or ship bread,	1,489
Potatoes,	37

Apples,	21,387	Wearing apparel,	153
Rice,	246,696	Combs and buttons,	511
Indigo,	177	Brushes,	95
Cotton,	39,591,351	Umbrellas and parasols,	706
Tobacco,	2,900,126	Leather and morocco skins,	747
Flax seed,	23,735	Musical instruments,	210
Hops,	423	Books and maps,	11,089
Wax,	92,473	Paper and stationery,	67
Household furniture,	5,051	Paints and varnish,	980
Coaches and other carriages,	250	Gold and silver manufactures,	311
Hats,	20	Molasses,	100
Beer, porter, ale, and cider,	98	Trunks,	186
Spirits from grain,	70	Non-enumerated articles,	268,617
Spirits from molasses,	8,858	Manufactures not enumerated,	125,627
Leather, boots, and shoes,	2,699	Sundry small articles,	5,462
Tallow, candles, and soap,	2,448		
Tobacco manufactured,	52,436	Total Domestic Exports,	$47,794,124
Lead,	99,361	Foreign Exports,	1,142,096
Nails,	120		
Manufactures of iron and steel,	2,052		$48,936,220
Medicinal drugs,	15,257	Deduct amount of Imports,	41,991,404
Cotton manufactures.	5,255		
Balance in favour of United States,			$6,944,816

We give these tables, as having the most important bearing upon our present commerce; on some future occasion, it is our intention to examine into our commercial relations with other countries.

There is also another subject connected with commerce, in which we feel a deep interest, and are very desirous to examine; and that is, the vast injury inflicted upon our ship owners, by what are called treaties of reciprocity, but which *should be called*, treaties to increase the tonnage of foreign nations, and decrease our own—under these treaties, our own proper trade being largely carried on in foreign vessels.

We have, however, necessarily, made this article longer than we could have wished, and must leave that subject, also, for some future number.

EMISSIONS OF COLONIAL CURRENCY,

IN RHODE ISLAND AND MASSACHUSETTS.

We published, some time since, a general historical account of Continental Money, by S. Breck, Esq., of Philadelphia.

As every thing relating to that period of time, and the state of the currency during our colonial history, is interesting, we are induced to devote a few pages to record the emissions of colonial paper by Massachusetts and Rhode Island.

These reminiscences are important, inasmuch as they forcibly illustrate the condition of things, before we had the protection of a government of our own—when we imported manufactures of every nature and kind whatsoever.

In nothing does the protection to our industry operate more beneficially, than in the effect it has to keep the currency sound and settled.

In this respect we ask the attention of our readers to the remarks upon the cause of the great depreciation of the currency, which will be found in this article, namely, "because the inhabitants of New England constantly consume a much greater quantity of British manufactures than their exports are able to pay for."

How certainly this cause produced the same effect, we think we have fully shown, in the article on Commerce which commences this number; indeed, we may, with confidence, appeal to our history from the colonial period of which Mr. Potter writes, down to the present day, and over-importation is ever found to have resulted in the same state of things.

Remove the protection from our manufactures at this time, to such an extent as to cause a flood of foreign goods to be imported, and no effect ever followed its cause with more certainty, than will the effect of injury to our currency from such reduction of duties on imports. The first and natural result, is the rise of foreign exchange, and this is soon followed by the shipment of specie, the curtailments of the banks, the increase of the interest of money, commercial failures, and a general unsettling of all values—with wide-spread ruin.

Surely we have had experience enough of this; and yet we see it stated, that the Secretary of the Treasury is busily engaged in preparing a tariff to reduce the duties to what is called a revenue standard.

We pretend not to know what is meant by the term revenue standard—nor can we comprehend the purport of another anti-tariff expression, become somewhat rife of late years, namely, *incidental protection.* We do know, however, that it sounds somewhat curious to hear of making the general welfare, one of the great objects for which government is established, *the incident*, and the collection of duties, the "*essential.*" It is, in our estimation, a complete perversion of terms. Whatever duties are laid, should be fixed and permanent—neither *accidental* nor incidental. We have assuredly suffered enough already with accidental legislation, as we think we have shown in our article on Commerce, and trust we shall have no more such scenes as those described by the public documents to which we have there referred.

Our readers will excuse this short digression, called forth from the remark made by the author of the following article, and which cannot be too often repeated nor too much dwelt upon, the substance of which is, that over-importations paralyze our industry, unsettle our currency, and spread distress and ruin over the land.

Our present sound tariff currency of hundreds of millions, contrasts favourably with either "Wampumpeage" or the Old Tenor; as do also our home manufactures to very near two hundred and fifty millions of dollars, by the census of 1840, no doubt much increased since, with the feeble state of our colonial existence, dependent as we then were, for our supplies of the commonest necessaries of life, upon a bad stepmother.

But we must not make our comment too long, and we now proceed to give the account of these colonial issues of paper money, without any other basis than the public credit, which shared the common fate of all such attempts to force a worthless medium into circulation.

Nothing can ever be sustained as money, unless at all times convertible into gold and silver; and a sufficient quantity of gold and silver to sustain the currency of the United States in a sound condition cannot be depended upon without a tariff, which sustains home manufactures and the labour of the country.

COLONIAL CURRENCY

BEFORE THE INTRODUCTION OF PAPER.

Wampumpeage.

This was manufactured by the Indians, and was of two sorts—black, made of the poquauhock or quohaug, and white, made of periwinkles. Many of the shells of which it was made came from Long Island. The Indians on the seashore were the first to manufacture it, and the inland tribes afterwards learnt it from them. The English learnt to trade in it from the Dutch. The wampumpeage served for a long time as a medium of exchange, and its value was at several different times fixed by law. In 1643, Massachusetts made it a legal tender for any sum not exceeding 40 shillings, the white at 8, and the black at 4 a penny. In 1649, in Rhode Island, black peage was fixed at 4 a penny. In 1658, all peage was fixed at 8 a penny, but white peage was receivable for taxes at 6 a penny. In May, 1662, having fallen very low, the law forbid its being received any longer for taxes or fees.—[*Holmes' Am. Annals.*]

Gold and Silver.

The gold and silver in the colonies was nearly all Spanish or Portuguese coin, as the exportation of English coin from England was prohibited by law.

In 1652, Massachusetts erected a mint at Boston, to coin silver of sterling alloy into 12d., 6d., and 3d. pieces, in value less than the British pieces by 2d. in 1s. The stamp was a double ring, Massachusetts and a tree on one side, and on the other New England 1652, figures XII. VI. or III. according to its value, with a private mark. A law was made to prevent any other coin but this, and English coin, from circulating in that State. The date of 1652 is on all the pieces, although the coinage was continued for several years. The exportation of it was discouraged, but in 1748 almost all of it had disappeared and been driven out of the country by the bills of credit.—[*Douglas*, I., 433.]

Bills of Credit.

After the Revolution of 1688, England was engaged in almost perpetual war with France, and as France was, until 1763, in possession of Canada, of course the colonies were engaged with the mother countries. The first of these wars continued from 1689 to 1697, and it was for the purpose of paying off her soldiers, on their return from an expedition to Canada in 1690, that Massachusetts made the first emission of paper money. It fell almost immediately to 14s. for £1. But it was soon called in, and from this time forward they continued to emit such sums as were needed for the treasury, and once in a while to call in a parcel by a tax. In 1711, they fixed the exchange of these bills at £140 for £100 sterling. In 1714 they emitted a Bank (as it was called) of £50,000. As they took the lead in the business, so they went beyond all the other colonies in the amount of their issues.—[*Douglas*, I., 310, *and* II., 13.]

Emissions of Paper Money in Rhode Island.

The first emission in Rhode Island was £5,000, in 1710. Another war with France had begun in 1702, which lasted until March 31, 1713. £2,000 more was emitted the same year. The bills were of all denominations from £5 to 2s. They were to be receivable for colony dues, and were to pass as current coin in all payments (specialities excepted) for five years. The reasons given for the emission of the latter sum were the scarcity of silver, and the debts contracted by the expedition against Annapolis Royal. In October the Assembly was obliged to pass a law to prevent counterfeiting the bills. As the bills were generally very coarsely made, it was no difficult matter to imitate them.

An important distinction is here to be noticed between bills emitted for the supply of the treasury, which emissions were generally in small sums as occasion required, and a *Bank*, which was an emission generally of a large sum, not for the exigencies of government, but to be loaned out at interest to the people, on mortgage security, for a term of years.

In July, 1715, a Bank of £30,000 was emitted in bills of from £5 to 1s, which, with £10,000 more emitted the same year, was called the First Bank. The reasons given in the act for the emission were, the long war against the French and Indians, the expeditions to Port Royal and Canada, &c. They were to be loaned out to the inhabitants of the towns at 5 per cent. interest for 10 years, on mortgage security of double the value. The annual payment of the interest was not provided for in the mortgages, but was secured by bonds, and thus the State was afterwards defrauded of a large part of the interest. [*See laws and schedules, February*, 1737–8, *and Dec.*, 1738]. £1,000 of the interest was to be annually appropriated to take up so much of the paper in circulation.

In May, 1716, Massachusetts issued a Bank of £100,000.

In May, 1721, Rhode Island issued a second Bank of £40,000, to be loaned out for five years in the same manner as the first Bank, and the interest to be payable in hemp or flax. Half of the annual interest was to be divided rateably among the towns. The reason given for the emission was, the scarcity of specie.

June, 1726, the £5 and 40s. bills of 1715 and 1721 having been counterfeited, were ordered to be called in and exchanged.

The colony continued, from time to time, to issue bills in small sums, as they were wanted to supply the treasury; and whenever a quantity of the money was received into the treasury, a committee was appointed by the General Assembly to burn it, and their reports are to be found in the schedules.

In May, 1728, the time of payment of the first Bank was extended from 10 to 13 years, and then, instead of being paid all at once, the borrower was allowed 10 years more to pay it in, one-tenth annually, without any interest after the expiration of the first thirteen years. The time of the second Bank was extended, in June, 1728, to 13 years, and then to be paid in, as above mentioned.

The depreciation of the bills, which begun soon after the first emission, must have been increased by this extension of the time of their redemption.

In May, 1728, a third Bank of £40,000 was emitted, and loaned out for 13 years. The reason given in the act was, the decay of trade and commerce.

In 1731 and 1733, new Banks were emitted, the latter of £100,000.

The bills of one colony generally passed in the neighbouring colonies the same as their own bills, and the rate of depreciation was affected to a considerable degree by the amount issued by any colony in the neighbourhood. The rate was probably about the same in Massachusetts and Rhode Island.

It will be observed that, although the colony took mortgages for the bills they loaned out, these mortgages were not the least security to the billholders. The bills were mere promises from the colony to pay a certain amount to the bearer, and the holders had nothing but the good faith of the government to depend upon. Thus they differed essentially from the bills of the Banks now established in Rhode Island, for the payment of which all the property of the corporation, and in numerous cases the private property of all the stockholders of the corporation, is pledged.

There was at first a combination made in Massachusetts to refuse to receive the Rhode Island bills of 1733, but it was not long adhered to. Large emissions were made the same year in Massachusetts, and the rate of depreciation very much increased.

To the emission of 1731 considerable opposition was made in Rhode Island. Gov. Jencks dissented from the passage of the act, and endeavoured to establish his right to a negative, but did not succeed. Memorials against it were presented to the General Assembly, from the merchants of Newport, complaining of the ruinous effects of the paper money on property and trade. After the act passed, the memorialists took out certified copies of the memorials and other papers, for the purpose of sending them to England; upon which the Deputy Governor, Wanton, convoked the General Assembly of Newport, August 3, who took away the copies from the memorialists, and forbid the colony seal to be put to any thing of the kind. Petitions and memorials from the Governor, the Newport merchants, the Council and the Assembly, were afterwards forwarded to the British Government, with what effect is not known.

The English Government had at various times endeavoured, but with little success, to restrain the emission of bills by the colonies. A proclamation was issued by Queen Anne, June 18, 1704, and an act passed in 1706–7, the 6th year of her reign, fixing the value of coin in the colonies. An order of Council was also made May 19, 1720, forbidding any emissions by the colonies without the royal assent.

One observation may be made here. The Legislature sometimes attempted to fix a sort of scale of the rate of depreciation at which the bills should pass. But the rate fixed by them was seldom so high as the actual rate. In Massachusetts an endeavour by some of the Council to fix the legal rate as high as it actually was at the time among the business portion of the people, subjected them to a great deal of odium.

The emissions of paper money were generally opposed by the merchants and business men, and the more intelligent part of the community. They were generally advocated by the multitude, who were indebted and distressed in pecuniary circumstances, as a measure of relief. It was an easy way of paying old debts. And members of the General Assembly would often be inclined to favour the emissions, not only from the desire of popularity, but the less honourable motive of pecuniary interest. Pretences were never wanting. The colony was in debt; the fort was out of repair, or a new gaol or court-house was to be built. And when the specie had been driven away by the increase of paper money, the "scarcity of silver" was a fresh excuse for further issues. And each new issue only involved the people, as a whole, in greater difficulties.

Those who were involved in debt, borrowed of the colony on mortgage a sufficient sum to pay those debts, as the bills were in many cases made a tender. At the end of the time fixed for paying the colony, a sufficient quantity of the same bills could be procured at a very low rate, and in many cases the government was defrauded of the interest.

The paper money was, probably, from about this time, one of the great subjects of party warfare. Governors were elected and turned out, as the different interests happened to prevail.

Of the interest of the emission of 1731, a bounty was established of 4d. per lb. on flax, 9d. per lb. on hemp, 5s. per. bbl. on whale oil, 1d. per lb. on whalebone, and 5s. per quintal on codfish, produced in Rhode Island, or brought in, in Rhode Island vessels. The bounty was to continue for ten years. Of the interest of the Bank of 1733, half was to be divided rateably among the towns.

In the emission of a Bank of £100,000, in August, 1738, provision was made for loaning it, and for securing the payment of the *interest*, as well as the principal, by mortgage. The colony had lost a considerable part of the interest of former Banks, as it was only secured by bonds.

By a report made by a committee to the General Assembly in October, 1739, it appears there had been issued for the supply of the treasury, up to that time, £114,001 15s., and £3,000 to lend to Nathaniel Borden. There had been called in and burnt £105,704 15s. 3d., leaving about £11,296 in circulation. But it must be recollected that this was in addition to the outstanding bills of the several Banks.

In September, 1740, on occasion of an expedition and fitting out a vessel against the Spaniards, a Bank of £20,000 was emitted. The former bills had merely expressed so many pounds, shillings, &c., on their face, but the Legislature further attempted to fix the value of the new bills by saying that they should be equivalent to a particular quantity of gold or silver. The same plan, as Hutchinson says, was attempted in Massachusetts in 1741. These bills were to be in value 9s. to an ounce of silver of sterling alloy, or £6 13s. 4d. to an ounce of coined gold.

Now began the denominations of New and Old Tenor. Occasionally, however, after this, bills were struck off upon the old plates. The new bills were called New Tenor, and the former bills Old Tenor. The bills emitted after this, it is believed, continued to be called New Tenor until about 1756–8. The bills emitted after that time, were called Lawful Money Bills.

In Massachusetts the bills went by different names also, viz: Old Tenor, Middle Tenor, New Tenor First, New Tenor Second.

In December, 1740, the Assembly having received instructions from the Lords Justices in England to observe the act of the 6th Anne, amended the act they had passed in September. The bills were to be loaned, and the borrowers, when the time came, were to make payment in the same bills, or in silver at 6s. 9d. per oz., or in gold at £5 per oz. This value was expressed on the face of the bills. In May, 1741, the Assembly made 6s. 9d. of the New Tenor equal to 27s. of the Old Tenor (that is, one to four) in discharge of all contracts, judgements, or otherwise. Great difficulty was found in collecting in the different Banks, as they fell due.

The Assembly on several occasions were obliged to order the mortgages and bonds to be put in suit.

In February, 1743–4, a Bank of £40,000 was emitted, of the same fixed value as the last, and one quarter of the annual interest was appropriated to be divided among the towns.

September, 1744, a colony tax of £10,000.

In August, 1746, the qualification of voters was raised from £200 to £400.

In 1748 Dr. Douglas estimated that there were in circulation in the several colonies, bills (calculated in *Old Tenor*) to the following amounts:

Massachusetts,	£2,466,712
Connecticut,	281,000
Rhode Island,	550,000
New Hampshire,	450,000

He also gives the following table of the province rates of Massachusetts, at different times:

1702,	£6,000	1743,	£60,000
1720,	6,000	1745,	120,000
1730,	8,000	1747,	168,324
1740,	39,000	1748,	381,672

By report of a committee to the General Assembly of Rhode Island, made in February, 1749, the following was then the state of the paper money business, giving the outstanding bills with the values as they reported them:

Outstanding of Bank of	1728	£8,000	equal to sterling	£727	5	6
" "	1731	12,000	" "	1,090	18	3
" "	1733	40,000	" "	3,627	5	6
" "	1738	90,000	" "	8,181	16	4
" "	1740	20,000	" "	7,272	14	6
" "	1743	40,000	" "	14,545	9	1
		£210,000		£35,445	9	2
Bills issued to supply Treasury, mostly in 1746 and 1747,		110,444 2 3½		1,040	7	5
Nominal amount,		£320,444 2 3½,	equal to sterling	£36,485	16	7

This report was made in answer to a requisition of the English Government, and no doubt gives the most favourable view of the case. They, probably, estimated the bills at their legislative values, and they seem to have considered as outstanding, only those shares or payments which had not then fallen due, whereas of those payments which had become due, a great part was with difficulty collected.

In December, 1748, Massachusetts made provision for taking up the greater part of her paper then in circulation, at a specified rate, with the money she had lately received from England to reimburse the expenses of the war, and the remainder by taxes, and in a very few years their circulation ceased. The bills of the other colonies were prohibited passing there. Dr. Douglas considers the change made by the act was rather too sudden, and the operation of parts of the act was indeed several times postponed. Many people anticipated a shock in business, but none took place there. The trade of Rhode Island, however, did receive a shock in the loss of the West India importing business, which they had always done for Massachusetts.—[*Hutchinson*, 440.]

By the Massachusetts act of 1748, a Spanish piece of eight was fixed at 6s.; an oz. silver at 6. 8d. The pieces of eight were then worth 4s. 6d. sterling.—[*Douglas.*]

Rhode Island, also, at several times, received grants of money from Parliament for expenses incurred in the wars, but they did not stop their paper issues.

The measures taken in Massachusetts produced, as might be expected, a great effect upon the value of the paper of Rhode Island. About this time it fell to *one-half* of its former value.

In April, 1750, the Massachusetts and Rhode Island bills were at par with each other. September 1, 1750, the Rhode Island bills were worth 20 per cent. less than Massachusetts bills; that is, a piece of eight in Massachusetts, sold for 45s. Old Tenor, and in Rhode Island for 56s. Old Tenor.—[*Douglas.*]

April, 1750, the exchange with London, in Massachusetts, was 11 1-2 to one. In September, of the same year, it was 9 1-2.

The state of things in Rhode Island must have been very unfavourable to trade. In the year 1752, Joseph Whipple, an eminent merchant of Newport, and at that time Deputy Governor, failed, and resigned his office, and was obliged to petition for an act of insolvency. Before this, failures were said to have been almost unknown in Newport.

Dr. Douglas observes, that in 1750 the paper money party got the majority in the lower House in Rhode Island, but that the upper House were rather opposed to the system.

In March, 1750–1, the ninth Bank, of £25,000, was emitted on new plates. It was for the purpose of giving bounties on flax, *manufactured* wool, the whale and cod fisheries. The bills were made equal to silver at 6s. 9d. per oz. Troy, or gold at £5 1s. 6d. per oz. 6s. 9d. of this emission was to be equal to 13s. 6d. New Tenor, or 54s. Old Tenor. Penalties were imposed to prevent depreciation below the following rate, viz: £137 10s. of this emission, or £275 New Tenor, or £1,100 Old Tenor, for £100 sterling.

In June, 1751, the act was amended. The bounties were abolished; that on manufactured wool as being displeasing to England, and the others as useless, and the interest was appropriated to take up bills emitted for the supply of the treasury; and 64s. Old Tenor, or 16s. New Tenor, or 6s. 9d. new bills, was made equal to 1 oz. coined silver of sterling alloy. The bills were to be for ounces instead of pounds, and to be let for ten years, instead of five.

In February, 1752, the value of a Spanish milled dollar was declared to be 56s. Old Tenor, as was the intent of the act of June, 1751.

In October, 1754, £25,000 of an Old Tenor tax of £35,000 was appropriated to sink bills.

In February, 1756, £8,000 *Lawful Money* bills were emitted, to be payable in two years. The value expressed in them was 6s. 8d. to an oz. of silver.

In August, 1756, the Assembly made provision for sinking the bills which had been issued in 1755–6 for the Crown Point expedition. One dollar specie was to be paid from the treasury for every £4 Old Tenor. A part of what was brought in, was to be exchanged for treasury notes.

In the acts which were passed about this time for emissions, provision was generally made for taking up the bills, at specified times, by taxes or otherwise. And I believe that after May, 1758, the bills emitted generally bore five per cent. interest.

In August, 1759, the Paper Money or Grand Committee's Office was settled up. The *non est* bonds (bonds which had been sued and the writs returned *non est inventus*) amounted to £41,869, the unsatisfied judgements on bonds to £8,400, and there were about £35,000 of bonds lodged in the hands of individuals to collect.

In October, 1761, £4,500 sterling received from England was appropriated towards redeeming the bills emitted in June, 1759, and the interest on the bills to be stopped. Treasurer ordered to reckon one dollar=4s. 6d. sterling=6s. Lawful Money, in paying them.

By report of a Committee, made in August, 1762, there were then outstanding,

Old Tenor bills,	£93,687	15	2½
Crown Point Old Tenor,	2,321	17	0
Lawful Money,	66,403	4	6

This does not include (I believe) any of the Banks.

In September, 1764, Old Tenor bills were ordered to be received, in payment of a tax, at the rate of 23 1-3 for one of the Lawful Money bills.

From time to time, acts were passed for calling in the bills of the different emissions, and giving to the holders of them treasury notes, when no other means were at hand. And these notes depreciated to about the same extent that the bills had done.

In June, 1763, the Assembly passed an act, in the preamble of which they refer to the Act of 6th Anne, declaring silver and gold only to be Lawful Money, and that all contracts should be discharged in them, unless otherwise specially agreed. Value of certain coins in Lawful Money to be, viz:

English Crown, weighing	19 pwt.,	8 ½ gr.	£0	6	8
English Shilling,	3 pwt.,	20 9-10	0	1	4
Spanish Milled Dollar,			0	6	0
One ounce of coined gold,			5	1	4

It further provided, that debts contracted to be paid in Old Tenor, should be discharged by paying so much of the bills as in actual value is equal to the nominal debt, (interest, if any, to be at six per cent.,) or else in so much Lawful Money as the bills are worth. The following table was made for the courts, as the Old Tenor value of a Spanish milled dollar.

1751,	£2	16	0	1758,	£6	0	0
1752,	3	0	0	1759,	6	0	0
1753,	3	10	0	1760,	6	0	0
1754,	3	15	0	1761,	6	10	0
1755,	4	5	0	1762,	7	0	0
1756,	5	5	0	1763,	7	0	0
1757,	5	15	0				

The passage of this act was protested against. [*See Schedules.*]

In October, 1764, a committee reported that there were then outstanding about £40,000 bills issued to carry on the war, and that these, with the remnant of the Old Tenor bills, would come to an end in 1767. This statement was prepared for the purpose of being sent to England.

In November, 1764, a sum of money received from England was appropriated to pay the bonds which had been given to redeem the bills of credit. The rate was to be $1=4s. 6d. sterling=6s. Lawful Money.

In February, 1769, 6s. Lawful Money ordered to be reckoned equal to £8 Old Tenor in payment of a tax.

By an act of September, 1770, the passage of Old Tenor bills, after January 1, 1771, was prohibited. They were to be brought into the treasury and exchanged for treasury notes at the rate of 6s. for £8 Old Tenor.

October 3, 1770, Kings County Jail was broken open in the night by a number of people in disguise, and several prisoners, one of whom was sentenced to be hung, let out and made their escape on horses which their friends had ready for them. Most of them were in confinement for counterfeiting, which was punished by cropping and branding, and confiscation of all the offender's estate.

In May, 1775, the colony having voted to raise troops, issued £20,000 in bills bearing 2 1-2 per cent. interest, and made it a tender for all debts, 6s. 9d. to the silver ounce. In August the Continental bills, of which there now began to be large emissions by Congress, were made a tender at the rate of 6s. to a dollar. Emissions were now made often by the colony. The persons who should endeavour to lower the value of the bills were declared public enemies, and all means were used and penalties imposed, during the Revolution, for the purpose of keeping up their value. [*Schedules*, *Aug.*, 1775. *July*, 1776. *Feb.*, 1780.]

In December, 1776, a committee of the New England States recommended to them to emit no more bills of credit, unless absolutely necessary, but to tax or borrow, and to emit (if any) bills bearing four per cent. interest, and payable in three years. The General Assembly approved of this plan, and ordered £40,000 to be hired, and notes given payable in two years, with six per cent. interest. The notes were to be given for dollars, and the Assembly reserved a control over the interest.

In February, 1777, they ordered £50,000 Lawful Money to be hired, and notes given (in dollars) payable in five years, with four per cent. interest. They also made these notes a legal tender.

This year they began to lay taxes again, and it would seem from the schedule of December, 1777, that Providence consented to a very high valuation, in order to induce the Assembly to lay the tax.

December, 1777, the Assembly ordered all bills over one dollar, which were not on interest, to be called in and burnt.

The money issued by the Continental Congress had now probably become the principal circulation, and had depreciated greatly. In June, 1780, the Assembly raised all the fees, fines, and forfeitures, established in 1774, forty for one. In November, 1780, the Assembly fixed a scale of depreciation for the Continental bills, from January 1, 1777, to April, 1780. All contracts were to be discharged in specie, (except in some specified cases,) and the tender acts repealed. May, second session, 1781, the scale was continued down to that time, and one dollar of the new Continental emission was made equal to twelve dollars of the old. The judges were appointed to fix the rate of depreciation, from time to time, and to publish it.

Acts were passed May, second session, 1778, June and November, 1782, for consolidating the paper money, ordering all bills and notes to be brought into the treasury, interest calculated at six per cent. from June 1, 1778, when they were struck out of circulation, and new notes given bearing interest.

May, 1786. After a hard contest, the paper money party prevailed in the election, and John Collins was elected Governor. A bank of £100,000 was issued, to be loaned out in the usual manner at four per cent. for seven years, and then one-seventh to be paid annually. These bills were made a legal tender, except for debts due to charitable corporations. Acts were passed in June and August to keep up the credit of the bills, and repealed in December. In September, 1789, the bills having fallen very low, the law making them a tender was repealed.

In June, 1791, the Assembly fixed the following scale of depreciation for thebills of May, 1786, to be used in ascertaining the amount due on certain State securities.

1786, July 1st........	Six shillings	in specie	to be equal	to 9 s.	of the bills.
" August 1st.....	"	"	"	to 10 s.	"
" September 1st..	"	"	"	to 12 s.	"
" October 1st.....	"	"	"	to 18 s.	"
" November 1st...	"	"	"	to 20 s.	"
" December 1st...	"	"	"	to 21 s.	"
1787, January 1st.....	"	"	"	to 24 s.	"
" February 1st....	"	"	"	to 27 s.	"
" March 1st......	"	"	"	to 30 s.	"
" April 1st.......	"	"	"	to 34 s.	"
1788, April 1st.......	"	"	"	to 38 s.	"
" July 1st........	"	"	"	to 45 s.	"
1789, January 1st.....	"	"	"	to 60 s.	"
" February 1st....	"	"	"	to 66 s.	"
" April 1st.......	"	"	"	to 72 s.	"
" May 1st.......	"	"	"	to 78 s.	"
" July 1st........	"	"	"	to 90 s.	"

In October, 1789, the rate of the bills of 1786 was fixed at fifteen dollars for one of silver, in payment of all judgements for silver. At the same session they provided that debts might be paid in real estate or produce, and that the bills of '86 should be a tender at par for all contracts made since November, '86, unless made specially for gold or silver. In September, 1790, an act was passed to allow those who had hired the money to pay it in before it become due. The bills of this emission have been made receivable at the rate of fifteen for one in payment of several taxes. [*Schedule, June*, 1817; *June*, 1818; *June*, 1819, *&c.*]

The depreciation of the paper of 1786 must have been hastened by the decision of the Supreme Court in the celebrated case of Trevet vs. Weeden, at the September, Newport term, 1786, that the act of emission was unconstitutional in several important particulars. For this decision the Judges were summoned before the Assembly, and heard there by counsel, and, after various debates and proceedings, they were discharged, October, second session, 1786.

The preceding minutes have been compiled principally from the State records and Dr. Douglas' Historical Summary of New England. Several quotations are also made from a well-known work of Mr. Gouge.

Extract of a Report made to the Legislature of Rhode Island:

The reason of the great depreciation observable in the bills issued by the colony, is because the inhabitants of New England constantly consume a much greater quantity of British manufactures than their exports are able to pay for, which makes such a continual demand for gold, silver, and bills of exchange, to make remittances with, that the merchants to procure them are always bidding one upon another, and thereby daily sink the value of paper bills with which they purchase them. And it is plain that when the balance of trade is against any country, that such part of their medium of exchange as hath a universal currency will leave them, and such part of their medium as is confined to that country will sink in its value in proportion as the balance against them is to their trade. For what hath been the case with Rhode Island bills, hath also been the common fate of all the paper bills issued by the other colonies in New England, they having been all emitted at nearly equal value, and have always passed at par one with another, and consequently have equally sunk in their value: and this will always be the case with infant countries that do not raise so much as they consume, either to have no money, or if they have it, it must be worse than that of their richer neighbours, to compel it to stay with them."

List of Emissions in Massachusetts,

To show the bills which were in circulation in 1748, calculated in Old Tenor.—[*Douglas.*]

Provision was made in the acts of emission for cancelling a certain sum every year by rates; thus, of the table here given, £409,800 would be cancelled in 1748, £540,000 in 1749, £140,000 in 1750, £135,200 in each of the years 1751 and 1752, £140,000 in each of the years 1753–4–5–6, and so on.

1745, February,.........	£200,000
" April,...........	200,000
" July,............	280,000
" August,.........	280,000
" December,.......	200,000
1746, March,..........	80,000
" June,...........	328,000
" July,............	100,000
" August,.........	80,000
1746, September,.......	£40,000
" November,........	80,800
1747, February,........	32,800
" April,...........	80,000
" June,............	32,000
" October,.........	136,000
1748, February,........	100,000
" June,...........	400,000

Table of Comparative Depreciation of Colonial Currency Bills of Credit, 1748.— [*From Douglas,* 1. 494.]

For £100 sterling exchange with London:

New England,.............	£1,100	North Carolina,............	£1,000
New York,................	190	South Carolina,.....	750
East Jersies,...............	190	Barbadoes,.................	130
West Jersies,............	180	Antegoa,..................	170 to 180
Pennsylvania,..............	180	St. Christophers,...........	160
Maryland,.................	200	Jamaica,..................	140
Virginia,................	120 to 125		

Table of Depreciation of Colonial Currency in New England.

	Exchange with London in Old Tenor.	1 oz. Mexico silver.	Spanish dollar, in Old Tenor	
*1702,...	£133	6s. 10½d.		
*1705,...	135	7s.		
1711,...	140			..Fixed at 140, by Massachusetts Legislature.
*1713,...	150	8s.		..Very little specie left in the country.
*1716,...	175	9s. 3d.		
*1717,...	225	12s. 0d.		
*1722,...	270	14s. 0d.		
*1728,...	340	18s.		
*1730,..	380	20s.		
*1737,...	500	26s.		
1739,...		27s.		..Fixed at 27s. O. T., by act of emission of R. I.
1740,...	525			..Anderson—quoted by Gouge.
*1741,..	550	28s.		May. Bills of the last R. I. emission to pass one for four Old Tenor.
1744,...	596			Committee gave 596 Old Tenor for £100 for colony agent—gold dust £24 per oz.
*1745,...	650			
*1748,...	1000-1100			
*1749,...	1100	60s.		
1750,...	1100			Bills on London sold by R. I. Committee. £275 New Tenor, or £1100 Old Tenor, or £137 10s. made=£100 sterling by act of emission.
1751,...				June. Valuation amended. 64s. Old Tenor, or 16s. New Tenor, to be equal to 1 oz. coined silver sterling alloy.
1751,...				August. Spanish milled dollar fixed at 56s. Old Tenor.
1751-2,.		£4		Dr. McSparran. Failure of Deputy Governor Whipple.
1761,...			£7	
1763,...			8	
1769,...				February. May. 6s. Lawful Money=£8 Old Tenor in paying a tax.

Those marked with a * are from a table in the work of Dr. Douglas.

EDUCATION AND PUBLIC SCHOOLS.

The subject of education and public instruction, although of the highest possible importance in every civilized country, has claimed so much of the mind of this community, and occupied the public press to such an extent, that there would really appear but little to add to what has already been promulgated respecting it.

It is, however, a theme on which too much cannot well be written. Forming, as it does, the only true basis upon which republican institutions can be reared with any hope of their permanent success, every effort to advance it, however feeble it may prove, should, as it appears to us, be continually put forth.

With this view, and that we may not show any thing bordering on neglect, where such paramount interests are at stake, we now publish a general account of the system pursued in Prussia, taken from a work entitled "Germany," the spirit of her history, literature, and social condition and national economy, &c., &c., by Bisset Hawkins, M. D., F. R. S., published in Frankfort, 1839; and also "The state of Primary Instruction in the Kingdom of Prussia, at the end of the year 1831," by M. Victor Cousin, Peer of France, and Member of the Royal Council of Public Instruction.

The latter, although not of so late a date as the former, is more in detail; and is, moreover, accompanied by several tables, which we also insert, that our readers may have a more full view of the statistics of this very important branch of public duty, and the policy respecting it, pursued in the kingdom of Prussia, where it will be seen that thirteen-fifteenths of the population receive the benefits of the public schools.

On some future occasion we shall resume the subject, being ardently desirous that this work shall ever be found among the foremost of its class, to spread before the country every information, which can by possibility have a tendency to throw a light, however feeble, upon a matter, than which none other has equal claims upon the deepest and most intelligent consideration of a republican community.

In vain shall we exult over the march of intellect, in all that relates to our physical comfort, if we are not mindful of the far higher and more essential advancement in our moral and religious progress.

We have often felt as though the subject of education in this country had been too much confined to the mere mechanical portions of it. Doubtless it is a great blessing to possess the power to read and write, and to have a reasonable knowledge of figures; but it should be always borne in remembrance, that in placing in the hands of the young and rising generation these acquirements, we are endowing them with a vast power, which is capable of being brought into action, alike, for good and for evil; and it may be well questioned, whether we are not in some cases adding to the risk of the future welfare of our youths, by placing such a power at their command, without teaching them the more valuable lesson of how to use it.

We were much struck with that part of the Prussian code of education in the general view taken of it, by Mr. Hawkins, where he tells us "The first object of every school, says the law of 1819, is to train up the young in such a manner as to implant in their minds, a knowledge of the relation of man to God, and at the same time to incite them to govern their lives according to the spirit and precepts of Christianity." In this connexion, too, it is proper to state that the Bible is fixed by law as one of the books which must be used.

This is indeed to educate them; to lay the right foundation upon which any reasonable hope can be entertained for their future well-being.

We would not press this too obvious truth; and touch upon it, only because we think there is reason to fear sufficient stress is not laid upon it by some of those who have the care of our public schools, and would be, doubtless, greatly alarmed at the thought that their anxiety to make good scholars of their pupils might end in placing within their reach a dangerous power! and dangerous it certainly is, to increase the responsibility of a moral agent, by giving him mere knowledge, without imbuing him with those religious and moral sentiments which alone can make him a happy man and a useful citizen.

With these few remarks, called forth by the all-engrossing nature of the subject, we shall for the present conclude, intending, as occasion may present itself,* not to withhold what we may at any time feel as belonging to us to say upon a theme which has claimed our most serious reflections, affecting, as we fully believe it does, in the most essential manner, the success of our institutions, and the individual happiness of millions now living and of myriads yet unborn.

PRUSSIAN SYSTEM OF EDUCATION.

The territory of the kingdom of Prussia is divided into ten provinces, which are subdivided into departments, circles, and parishes. Every department has a board of education, which employs school inspectors, who reside in the chief towns of every circle, and who inspect all the schools in it. Every circle and parish has also its school board, and every school its proper inspectors or committee; the clergyman of the parish is, by virtue of his office, one of the inspectors. There is also another officer, the school counsellor, who inspects the schools, quickens and keeps alive the interest of the different boards and schoolmasters, and reports to the higher authorities. The whole system, since it came into operation in 1819, has been under the cognizance and control of the minister of public instruction, who is assisted in his deliberations by a council. The minister, though fully informed of the results of the system, by long and accurate reports from the dependent functionaries, does not interfere minutely with its details. The functionaries in the department of public instruction have, for the most part, a salary attached to their offices. The educational establishments are one elementary or primary school, two burgher or middle schools, gymnasiums, and three universities.

All parents who are unable to prove that they can give their children a competent education at home, are bound by law to send them to school as soon as they have reached the age of five years. All masters and manufacturers, who employ children as servants or apprentices, are required to give them a suitable education, from their seventh to their fourteenth year inclusive. No child can be removed from school, till the inspectors have examined whether he has gone through the whole elementary course. Care is everywhere taken to furnish necessitous parents with the means of sending their children to school, by providing them with clothing and books. The schools are supported by endowments variously derived, by a tax upon property, and by contributions of parents who are able to pay for the education of their children. The number of children in a school must not be too great, nor can one master have more than a hundred scholars. No schoolmaster collects the dues; this must be done by the board or committee. Children are permitted to contribute to a fund, for the education of those who are too poor to pay their portion of the charge. There are some schools, in large places, entirely free to the poor. No schoolmaster is allowed to increase his income by occupations inconsistent with the dignity of his office. The committees are legally responsible for all the expenses of the schools and for the management of their funds.

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* At the moment of concluding this article, we have received the returns of the public schools in Rhode Island. There had been 11,386 male and 9,710 female children who had received the benefit of the public schools there, at an expense of $53,606 89, for the year ending in June, 1845.

The schoolhouses must be built in a healthy situation, must contain good sized rooms, be well ventilated, and kept with great neatness. In villages or small towns they must have a garden belonging to them, which is made available to the scholars for instruction in botany and horticulture. In front of, or behind the school, a gravel court must be laid out for exercises. Maps and geographical instruments, models for drawing and writing, instruments and books for studying mathematics and natural history, are supplied, according to the wants of the scholars.

The first object of every school, says the law of 1819, is to train up the young in such a manner as to implant in their minds a knowledge of the relation of man to God, and at the same time to incite them to govern their lives according to the spirit and precepts of Christianity. The daily occupations, therefore, shall begin and end with a short prayer, and some pious exhortations, and all the solemnities of the schools shall be interspersed with songs of a religious character. Obedience to the laws and attachment to the sovereign and state are to be carefully inculcated. No kind of punishment which has a tendency to weaken the sentiment of honor shall in any case be inflicted. Incorrigible scholars, after the necessary attempts to reclaim them have proved futile, are to be expelled.

In the elementary schools the course of instruction is, to comprehend religion as a means of forming the moral character of children according to the positive truths of Christianity; the German language, and the language of the country in provinces where another is spoken; the elements of geometry and drawing; calculation and practical arithmetic; the elements of physics, geography, general history, and especially the history of Prussia; singing, principally for the purpose of religious exercises; writing and gymnastics; and the simplest mechanical and agricultural operations. The instructions in religion, reading, writing, arithmetic, and singing, are to be strictly indispensable in every school.

In the burgher or middle schools the course of instruction is to include, besides the most important of the foregoing subjects, exercises in style; the modern foreign languages in the German part of the country as an accessory branch of the study; Latin, as a means of exercising the faculties of the pupil, and of determining whether he is to enter the higher schools; the elements of mathematics, and a thorough course of practical arithmetic; and the Prussian laws and constitution.

Periodical examinations are to be held; and on quitting the elementary school, the pupil is to receive a certificate as to his capacity and his moral and religious disposition, signed by the master and the school committee. No special books are to be prescribed for the different branches of instruction in the primary schools, which are to be free to adopt the best works as they appear. For religious instruction, which in Protestant schools is founded mainly on the Holy Scriptures, the Bible and the catechism generally adopted shall be used. The New Testament shall be given to children who can read. The more advanced scholars shall have the whole Bible in Luther's translation; this book shall be also used for the religious instruction in all the classes of the gymnasium.

Public examinations of the boys' schools are to take place at intervals, and if possible on days celebrated in the national history. Examinations of the girls' schools shall also be held, but only in the presence of the masters and parents. Parents may address complaints to the proper authorities, respecting the education of their children, but they must not present any obstacle to the conformation of the latter to the rules established in the schools.

Clergymen are to seize every opportunity, whether at church, or during their visits of inspection, of reminding teachers of their high and holy mission, and the people of their duty towards the public instructors. The people, in short, are to be brought, as much as possible, to regard education as one of the essential conditions of public life, and daily to take deeper interest in its progress. In 1833 there were about fifty schools for teachers, or normal schools as they are sometimes called, in Prussia, in which the course of study lasts three years. The demand for new teachers in the respective departments is regularly ascertained, and no more are educated than can find employment in the country. The same establishments train masters for the lower and higher schools; the expense of them is chiefly defrayed by the government. The supply of teachers is not entirely furnished by these seminaries; but the standard of fitness which is set up in them, is applied by law to all other candidates for the office of teaching. Females have to go through a certain system of preparation for the tuition of their own sex.

The nomination and election of schoolmasters are decided by the committee and the inspectors of schools conjointly, who generally apply to the seminaries above mentioned for teachers, and never accept one unless he is recommended according to law. The appointment is ratified by the provincial board, and sometimes by the ministerial authorities. Incompetent teachers are sometimes returned to their seminary for additional preparation; and no inefficient teaching, or lax discipline, is overlooked or permitted in the schools.

The directors of schools are expected to be the guides and friends of the teachers. They are bound, says the law, especially to attend to the young masters, to give them advice, set them right, and incite them to aim at perfection, by attending to the plans of more experienced masters, by forming conferences, and by studying the best works on education.

Of the children in the Prussian monarchy, between the ages of seven and fourteen, it is calculated that thirteen-fifteenths, or about eighty-two per cent., are educated in the public schools.

These are the regulations, but it must not be supposed that they are always carried into effect; they are sometimes evaded, or inadequately carried into practice.

After this compact and pleasing picture of the Prussian system of public education, it is natural to inquire into the results which it has actually produced. On this subject I find it is impossible to produce any satisfactory authority. It is in vain to seek for results in the works of those who have only studied the plan in its programme, and in decrees, and who have not looked into the farm house, the barrack, the manufactory, and the cottage, for the measure of its realization.

Let me not be understood to speak with disrespect of a noble attempt to advance humanity. I only maintain that such measures are to be tested by their operation on the mass of society, and that, in appreciating political experiments, we are not merely to analyze them upon paper.

I am the last person to attach much weight to my own observations;

but, in default of the remarks of others, I have not succeeded in discovering that the Prussian peasant or artizan is better informed or more moral than his neighbours; his manners are not superiour, nor does he appear to solace his hours of leisure, more than others, with study or books.

But the formation of character is so intimately blended in Prussia with the military system, which converts every man into a soldier for a certain period of his life, that it is difficult to ascertain the respective space which is to be ascribed to the various elements which combine to mould the individual.

The most intelligent and best informed peasant in Europe has appeared to be the Scotch, while the Austrian rustic is, perhaps, the happiest.

SUPPLEMENT TO THE REPORT ON PUBLIC INSTRUCTION IN PRUSSIA, PUBLISHED IN 1833.

State of Primary Instruction in the Kingdom of Prussia at the end of the year 1831. *By M. Victor Cousin, Member of the Royal Council of Public Instruction.*

Primary instruction is too far advanced in Prussia to render it necessary to make very frequent reports on the subject. There was an interval of six years between the publication of the two last by the government. The first was in 1819, the second in 1825. I have stated elsewhere the results of these two important works.* A similar one has just been accomplished at Berlin, giving the state of primary instruction in Prussia at the end of the year 1831, the number of schools, that of the children who attend those schools, and of the masters employed in them. This document has not yet been made public; I am indebted for it to the kindness of Baron von Altenstein, minister of public instruction and ecclesiastical affairs.†

Figures are only general expressions of facts. Before we use them, therefore, we must begin by scrupulously asking ourselves what are the facts which those figures represent, and what the evidence on which they rest. We shall find, that in this case, guarantees for the accuracy of the data exist in superabundance.

As the Prussian law renders it legally obligatory on parents to send their children to school, unless they can prove that they give them a sufficient education at home, the committee of management, (*Schulvorstand*,) which in every parish is appointed to watch over the execution of the laws concerning primary instruction, makes an annual return of the children who are of an age, and consequently come under the obligation, to go to school. The master authenticates their presence or absence, and also returns a list of attendance, which must agree with the legal list furnished by the committee. He is bound to send in this attendance-list once a fortnight to the committee, which takes all the measures necessary to insure the execution of the law, and which is, in its turn, obliged to present this list, certified as exact, to the inspector of the circle for primary schools (*Kreisschulinspector.*) This officer, after carefully verifying the facts which prove that the law is carried into effect throughout his circle of inspection, sends in this same list, countersigned by himself, to the counsellor of the department or regency, who is charged with all that relates to primary instruction in the departmental administration. The departmental administration is equally obliged to authenticate all these returns, and to forward them to the provincial authority in which resides the supreme superintendence of schools throughout the whole province (*Schul-Collegium.*) Lastly, the provincial authority must render an account of all these proceedings to the central ministerial authority. One branch of this ministry consists of a special board or office for statistics, whose sole business is the verification and generalization of all the documents furnished by the public authorities in every step of this ascending scale of power and responsibility. Mr. Hoffman, a distinguished member of the Academy of Sciences of Berlin, is at the head of this office, where the work assumes its last and most perfect form, and is sent up with all the documentary proofs to the minister who lays it before the public. We may, therefore, place implicit confidence in figures obtained by such a process, and ultimately resting on the legal lists of children of age to go to school, and on the lists of actual attendance, checked by the several authorities. I subjoin models of these two kinds of lists, which are the same for all the schools throughout the monarchy.* It must be observed that the attendance lists, being verified twice every month, prove not only the presence of the children at the commencement of the year, but the punctuality of their attendance throughout the year. Thus there are no false appearances, no fictitious lists. The number of days a child has missed school during the whole year is known with perfect accuracy. The sum total of the children of a school, sent by the master to the parochial committee of that school, is subject on the spot to the immediate and constant check of that committee, and to the frequent control of the primary inspector of the circle. The accuracy of the whole series of subsequent figures rests on the accuracy of this first total, and this is guaranteed by the reciprocal check of the several authorities, all acting on the spot, or in the district. We may therefore proceed with perfect confidence, and may deduce from the figures all the consequences they comprise; because these figures represent facts, the truth and accuracy of which are incontestible.

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* See Report, &c., p. 134 to p. 167.

† In the *Ansiegeblatter* of the *Berliner Jahrbucher fur Wissenschaftliche Kritik*, three very curious and interesting tables have appeared successively in the Nos. for October, November, and December, 1833; the first showing the state of the Universities of Prussia, the second that of the Gymnasia, the third that of the Popular Schools. These were drawn up by persons in the service of government, and are highly worthy of the attention of all who are interested in the statistics of education.—Transl.

The most general result given by the statistical tables now under my eye is as follows:

According to the latest census, the population of Prussia is 12,726,823. Out of this population, it was estimated, in 1831, that 4,767,072 were children of from one day to fourteen years old.

This total sum is founded on the several sums returned by each province and each regency of Prussia in Table III. hereto annexed.

We must observe, that from punctilious exactness, the children of the garrisons maintained by Prussia at Mainz and Luxumburg are not included in this calculation, because these children do not attend the schools of Prussia. The number of them is 660, of whom 327 are boys and 333 girls.

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* As these lists are precisely the same as those already given in the body of the Report, pp. 31, 32, I have not thought it necessary to repeat them.—Transl.

In Prussia the age fixed by the law for going to school is from 7 to 14, inclusive; and I must here take occasion to remark the extreme utility of having a legal age for education. People are thus accustomed to regard a portion of their lives as necessarily set apart for learning. In France, there is a fixed age for entering the *college* and for leaving it. It is much to be desired that, in like manner, an age should be appointed for going to the primary school, and for quitting it. It is obvious that children of this class cannot be kept at school beyond fourteen; for any longer sacrifice of their time and labour would become burthensome to poor families; and besides, the children ought then to enter on the special business by which they are to gain a livelihood. If they are to quit school at fourteen, it is reasonable they should enter it at seven; for seven years afford time sufficient for the solid acquisition of the small number of branches of knowledge of which primary instruction consists; and on the other hand, they do not afford too much, considering the necessary interruptions occasioned by rural labours at certain seasons of the year. The General Law of Prussia (*Preussisches Landrecht*) fixed five as the age for going to school. The special law on public education, however, puts it at seven, and it is not till then that legal compulsion begins.

It is a rule of statistics that, calculating the relative mortality of the several ages, out of a hundred children of from one day to fourteen years, those between seven and fourteen form three sevenths, which gives, out of every hundred, about forty-three of age to go to school, (or, to give the minutest fractions, 42,857 in 100,000,) and, consequently, in Prussia, 2,043,030 children of the 4,767,072 composing the total population of children from a day to fourteen years old. Hence it follows, that if we find that there are in fact 2,043,030 children in the schools of Prussia, we may be certain that there does not exist a single human being throughout that monarchy who does not receive an education sufficient for the moral and intellectual wants of the laborious classes. This were indeed an admirable result, and one which would raise to a high pitch of distinction the system of primary instruction which had produced it. Now this result, glorious and admirable as it is, is an incontestible fact. I have under my eyes, and the Table No. III. already cited, exhibits, regency by regency, and province by province, the actual number of children, who, according to the accurate calculation of the attendance-lists, frequented the public primary schools in the year 1831; and this number is 2,021,421 children.

The difference is therefore only 21,609 between the real and the normal number.

This difference is very slight, and even this will vanish if we take into account the following considerations:

1. These calculations are founded only on the public primary schools, and do not include the private ones, which, though not very numerous, still contain a good number of children, especially in the large towns, and in the more backward provinces, in which the whole dignity of public education is not yet felt.

2. No account is likewise taken of the children educated at home, which would include the greater part of the children of the higher classes.

3. Neither are the boys belonging to the lower classes of the gymnasia reckoned, almost all of whom are under fourteen years of age; and whose number, in the hundred and ten gymnasia of the monarchy, amounted, in the course of the summer of 1832, to 17,935, while the two higher classes amounted to only 5,848.

Taking into account these three new elements, it is clear that not only the number of children under fourteen who receive, in one way or another, the benefits of education, is equal to the normal number of the three-sevenths of the population, but that it must actually exceed that number. This remarkable circumstance can be explained only by a supposition which we shall presently see borne out by indisputable fact, namely, that in the most civilized provinces of Prussia, in those of Saxony and Brandenburg for instance, the taste for instruction is so generally diffused that parents anticipate the age fixed by law for sending their children to school. We have here, I repeat, arrived at a result truly admirable; and with the guarantees for its accuracy which I have pointed out, a result above all suspicion or uncertainty. We must regard it under its most important aspects.

The first thing to consider is, the relative proportion of each province in that total sum of 2,021,421 children attending public schools. The knowledge of this proportion is of the greatest value, as a test of the relative civilization of the different parts of Prussia. But this is a question which does not directly concern us, and I shall therefore content myself with referring to Table III. It will there be seen that, of the eight provinces of which the kingdom is now composed, five greatly exceed the normal number of three-sevenths; that one of them, the province of Saxony, including the regencies of Magdeburg, Merseburg, and Erfurt, exhibits a proportion of 54,515 children going to the public schools, in every 100,000 between the ages of one day and fourteen years; and that the single department of Magdeburg actually exhibits a proportion of 55,733 in every 100,000. As may be expected, the province of Posen is the least advanced. Berlin shares the fate of all great cities, where a thoroughly exact control is peculiarly difficult, and where the law cannot be so rigorously enforced. There are also at Berlin, as in all large cities, a great many private schools. Besides, the organization of primary public instruction is recent in that city. On the other hand, Berlin contains six gymnasia, which, in the summer of 1832, had 2,061 scholars; of whom 396 are in the higher, and 1,665 in the lower classes, which comprise a great number of boys under fourteen.

A more important point for our consideration is, the relative proportions of the sexes in the sum total of children receiving primary instruction. This proportion is, in every country, the measure of the true strength of primary instruction; for education has no firm root, no stable and certain existence, when that sex which exercises so varied and so powerful an influence over the other is deprived of a just share of its advantages.

God be praised, every human being in Prussia falls under the beneficent protection of the law; the legal obligation to go to school is equally binding on both sexes. Accordingly, the difference in the proportion of girls and of boys in the sum total is inconsiderable. Out of 2,021,421 children attending school, there were, in 1831, 1,044,364 boys; that is to say, 43,694 in 100,000—*i. e.* more than three-sevenths of the total population of children under fourteen years of age; and 977,057 girls, that is, 41,106 in 100,000. The difference *plus* for the boys is explained by their going to school before the age of seven; the difference *minus* for the girls is easily accounted for, if you recollect that, the education of girls being in its nature more domestic, the number of children of the female sex brought up wholly under their mothers' roof, especially in the more affluent classes, is of necessity much more considerable than that of boys.

I ought now to describe the nature of the public schools to which these 2,021,421 children, boys and girls, resort. In Prussia, (as henceforward in France, if the project of a law on primary instruction is adopted by the Chambers,*) primary instruction is divided into two degrees; the one including those elementary kinds or branches of knowledge of which no human being can be devoid, without extreme danger to himself and to society; the other, more elevated, yet not very much so, adapted to that portion of the people who, though not rich, are not pressed down by poverty, and who stand in need of an education a little more liberal and enlarged.

The first degree—lower primary instruction—comprehends the schools called *elementary*, from the nature of their objects; the second—higher primary instruction—comprehends the schools called *burgher*, because they are intended for that part of the population which in German is still called *Burgerschaft* (*bourgeoisie*, citizens.) These schools are likewise called *middle* or *intermediate* schools, because they stand in the midway between the elementary schools and the learned schools, or *gymnasia*.† This latter name—middle schools—taken from the nature of the thing, is perfectly suitable; and necessity and the public instinct have already begun to naturalize it in France. I have given an account of the course of tuition in an *elementary* and in a *middle* school in another place.‡ Here I have only to give the total amount of both sorts of schools in Prussia, at the end of the year 1831.

In the annexed table, No. IV., it will be seen that there are 22,612 primary public schools for the 2,021,421 children who frequent them.

Of these 22,612 schools, 21,789 are elementary, and 23 middle, schools; of which 481 are for boys, and 342 for girls. Now, there are 1,021 towns in Prussia, only 26 of which contain more than 10,000 souls. Thus, not only all the towns containing 10,000 souls, but three-fourths of all towns whatever, have, besides the elementary schools indispensable for the lowest class of citizens, middle schools calculated for the trades-people of those towns.

Out of the number of children who go to the schools, the elementary schools are attended by 987,475 boys, and by 930,459 girls; and the middle schools by 56,889 boys, and by 46,598 girls; which gives the total amount stated above, of 1,044,364 boys and 977,057 girls, in actual attendance on school. It must be remarked that, generally speaking, the elementary schools, especially in the country, are common to both sexes, and are only divided, at least in the lower classes, by occupying a distinct part of the same room; whilst, in the middle schools, all the classes of boys and girls are separated, and sit in different rooms which have no communication. It is reckoned that there are, on an average,

Children for an elementary school of boys and girls,..........	88
Children for a middle school of boys,..................................	118
Children for a middle school of girls,..................................	136

Thus it must be observed, that in elementary schools there is usually but one master, whereas in middle schools there are two, three, and often more, masters and mistresses.

This leads us to the last point for consideration—the number of masters and mistresses employed in the different primary schools.

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* This *Projet de Loi* passed the Chambers in June, 1833.—Transl.

† They are also called *Realshulen*, real schools, or schools in which knowledge of the most practical kind, the most applicable to *things*, (*res*,) is taught.—Transl.

‡ Report, &c., pp. 51, 55, 57.

Table IV. shows that for the 22,612 public schools, elementary and intermediate, of the monarchy, there are in all 27,749 masters and mistresses, who are distributed as follows:

21,789 elementary schools,	22,211	regular masters.
	694	regular mistresses.
	2,014	assistant masters and mistresses.
421 middle or burgher schools for boys.	1,172	regular masters.
	360	assistant masters.
342 middle or burgher schools for girls.	538	regular masters.
	289	regular mistresses.
	471	assistant masters and mistresses.

These numbers give an important result; *i. e.* the smallness of the number of mistresses compared to that of masters. In the elementary schools, the number of 694 mistresses, compared to that of 22,211 masters for 21,789 schools, shows that there is not a single school which has not its regular master; while I can assert, that I never found a single public school in Prussia under the management of a woman. It is the opinion there, that, generally speaking, the government of a school requires the hand of a man; the director is indeed allowed to have a female assistant when needed, but he must retain the head management. In villages, this assistant is usually the schoolmaster's wife or daughter. She is never intrusted with any but the accessory lessons, those manual works peculiar to her sex, and, in towns, with the singing lessons. When the school is rich, and on an extensive scale, this woman has the rank of regular mistress; and of such there are, as we see, but 694 for the 21,789 elementary schools: ordinarily, she is a mere assistant to the head master. It is a prejudice, and a most pernicious prejudice, that in day schools—as all public schools, (that is, schools for the public,) are or ought to be—only a woman is fit to direct the education of girls; in that case education on a grand scale were impossible, for it would be impossible to find capable mistresses sufficient for all the classes of all the 21,789 schools of the monarchy. Normal schools must then be created for the training of school-mistresses in equal number with those for the training of masters. This would be to create enormous difficulties, only to come at an undesirable result; for education would be far from gaining in solidity and weight; and, in a girls' school, the sight of a woman, chief and manager, and a man her subordinate and assistant, is of itself a bad sort of lesson. In a school, as in a family, the government belongs to the man—the woman is the helper. It is clear that in the burgher schools, where the course of education is much fuller, the woman's share must be considerably larger; thus we see in this class of schools, 289 mistresses for 342 girls' schools. But, associated with these 289 mistresses, are 589 masters. It is therefore still a man who is always at the head of the entire school, and who has the charge of the most important lessons. I regard this practice as the sole means of having girls' schools. But I must remark that in Prussia, and throughout Germany, most of the schoolmasters marry early and are fathers of families.

I have only to add some details on the condition of the establishments for training able masters for the elementary and burgher or middle schools; I mean the primary normal schools, called in Prussia, seminaries for schoolmasters (*Schullehrer-Seminarien.**)

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* This is a much more accurate and significant name than the French *normal, i. e.* pattern, schools, which these are not.—Transl.

There are two sorts of establishments of this kind : 1. the small normal schools, which are in great number and very useful, and which are nearly what our model schools are, or ought to be ; 2. the great primary normal schools, where the course of study extends over two or three years, and each of which contains from 40 to 100 pupils. I shall confine myself here to the latter. In 1831, there were 33 in full activity, that is to say, more than there are regencies in Prussia—and a Prussian regency is not so large as a French department. Table V. exhibits the sum total of the cost of each of these great establishments, with the share of that cost borne by the regency, and that borne by the state. This latter share alone is about 331,500 francs, (£13,260,)—a fact to which I particularly wish to call attention, as giving an idea of the importance of these establishments. They now furnish almost all the masters of the public schools, elementary and intermediate, in the kingdom. I must add that the share of the expense of the elementary and middle schools borne by the government, is, according to a Table annexed to Table V., (*Vide Table* VI.,) about 863,000 francs, (£34,520,) which gives in all 1,194,200 francs, (£47,780,) a considerable sum for a country containing less than thirteen millions of people, and under a system of national education in which the parishes, regencies, and provinces, are compelled by law to bear all the expenses relative to primary instruction, to which the state contributes only as matter of bounty and favour. It should be remarked, too, that here are no establishments to found but only to keep up and improve those already founded and organized.*

Lastly, if we wish to compare the leading results of these statistical documents with those of the documents of 1819 and 1825, we shall find that,

1st, In 1819 the number of schools was, in all,	20,085
" 1825,	21,623
" 1831,	22,612
2nd, " 1819, the number of schoolmasters and mistresses was	21,895
" 1825,	22,965
" 1831,	27,749
In 1825 the number of children under fourteen years of age was	4,487,461
That of children from seven to fourteen,	1,923,200
That of children attending school,	1,664,218
In 1831 the total number of children under fourteen was	4,767,072
Out of which, the number between seven and fourteen was	2,043,030
Out of which, the number of children attending school was	2,021,421

This comparative statement abundantly proves that primary instruction is in a most satisfactory state in Prussia. The organization to which this remarkable success is to be attributed may be seen in detail elsewhere.† I shall here confine myself to recapitulating and noticing the following points :

1. A law which constrains parents, guardians, and master-manufacturers or artisans, to show, under penalties more or less severe, that the children under their care receive the benefit of instruction, either public or private ;—on the principle that the giving of the degree of instruction necessary to the knowledge and the practice of our duties is itself the highest duty, and an obligation to society quite as strict as that of military service for the common defence. In my judgement, such a law is not only

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* See a very interesting paper on Prussian Normal Schools in the *Journal of Education* [No. XI.] containing a statistical account of the number and extent of the seminaries for teachers of the lower schools in the Prussian dominions.

† Report, &c., p. 22 to page 133.

justifiable, but absolutely indispensable; and I know not a single example of a country in which such a law is wanting, and in which the education of the people is in a flourishing or satisfactory state. Until the time when the progress of public morality, the sincere love of the people, and a true understanding of what liberty means, shall dictate to our Chambers such a law, (which I confess would now be premature and at variance with our prejudices of all kinds,) the government ought to neglect none of the means, direct or indirect, at its disposal for stirring up or encouraging the desire for instruction, and for attaining those ends by administrative, which it may be, as yet, inexpedient to attempt by legislative measures. Among the safest means, I should suggest—1st, the fixing of a determinate age for going to school, and for leaving it—2nd, the institution of lists of attendance, effectually checked by the competent authorities.

2. The imposing of an obligation on the clergy to admit to the communion table no young persons who could not prove that they had passed, or were passing, the requisite time at school;—an obligation at once civil and ecclesiastical, which interests the church in the school, and binds the school to the church by those strict ties which every statesman and every true philosopher ought to labour to strengthen. Hence instruction comes to be regarded, both by parents and by children, as the foundation of true piety; while the authority of religion ministers to the service of knowledge.

3. The institution of public schools, as the fulfilment of a public duty. From the time that the state makes the attendance of children at school a legal, and the church makes it a religious duty, the state would be in contradiction with itself, if it did not provide for the execution of the law it has itself enacted, by requiring the establishment of a public school in every parish. There is no stability, no permanent future, for the instruction of the people, but in schools maintained at the public charge, and under the care of the public authorities. Private speculation, which ought never to be thwarted, ought, on the other hand, never to be regarded as any thing more than an accident, and consequently a supernumerary aid. The state ought no more to rely on individuals for the execution of its own duties in the matter of education, than in any other matter of public and general interest.

4. The division of the charge of the schools among—1st, the parents, who, if they can, are obliged to pay something—2nd, the parish, which is bound to assess itself to a school-rate—3rd, the department, or the province, which have funds for the succour of necessitous parishes—and 4th, the government, which assists in the last resort; so that the charge, thus divided, lights on every body and oppresses nobody.

5. The proportional participation of the householders and the parish, of the department and the province, of the church and the state, in the superintendence and management of the schools—a participation which interests every individual, who has any influence in society, in the education of the people.

Such are the most general causes of the prosperity of primary instruction in Prussia—a prosperity incontestibly proved by the official documents I have just communicated.

May causes so simple and so prolific be speedily naturalized in our beloved country, and bring forth the same fruits!

VICTOR COUSIN.

April 25th, 1833.

TABLE III. *General Census of the Children attending the Primary Public Schools, at the end of the year* 1831:

Names of the Regencies of Prussia.	Number of children from 1 day to 14 years old.		Number of children attending the public elementary schools, and middle or burgher schools.		In every 100,000 children, number who enter these public schools:
	Number in each regency.	Total in the province.	Number in each regency.	Total in the province.	
Province of Saxony.					
Reg. of Magdeburg,.............	193,071		107,606		55,733
Merseburg,.............	213,677		116,801		54,662
Erfurt,................	99,385		51,514		51,833
		506,133		275,920	54,515
Province of Westphalia.					
Reg. of Munster,...............	125,360		60,179		48,005
Arnsburg,..............	166,085		79,696		47,985
Minden,................	152,135		70,318		46,221
		443,580		210,193	47,386
Province of Brandenburg.					
Reg. of Potsdam, (exc. Berlin,) ..	246,833		122,019		49,434
Frankfurt on the Oder,...	246,170		114,527		46,524
Berlin, (the city of,)......	67,709		20,341		30,042
		560,712		256,887	45,814
Province of Silesia.					
Reg. of Liegnitz,...............	259,597		129,301		49,809
Breslau,...............	335,726		155,165		46,219
Oppeln,................	293,939		116,077		39,490
		889,262		400,543	45,042
Province of the Rhine.					
Reg. of Coblentz,...............	153,975		75,425		48,985
Trier, ...	138,724		62,761		45,242
Coln,..................	137,210		53,844		39,242
Aachen,................	120,590		44,993		37,311
Dusseldorff,............	248,495		90,584		36,453
		798,994		327,607	41,002
Province of Pomerania.					
Reg. of Stettin,................	160,204		73,603		45,943
Coslin,................	129,896		50,535		38,904
Stralsund, ...	52,320		15,482		29,591
		342,420		139,620	40,775
Province of Prussia.					
Reg. of Konigsberg, ...	275,717		115,561		41,913
Dantzig,...............	124,859		51,315		41,098
Gumbinnen, ...	207,595		82,849		39,909
Marienwerder,...........	183,333		64,114		34,972
		791,504		313,839	39,651
Province of Posen.					
Reg. of Bromberg,...............	142,555		32,714		22,948
Posen,................	291,912		64,096		21,958
		434,467		96,812	22,283
Total number of children for the whole kingdom,..............		4,767,072		2,021,421	42,404.000

Note. The number of children of age to go to school, *i. e.* from 7 to 14, is generally calculated at three-sevenths of the total population of children of from one day 7 to 14 years inclusive. This calculation gives, in every 100,000,....42.85.

TABLE IV. *Census of the Primary Public Schools, Elementary, and Middle, for Boys and Girls, and of the Masters employed in them:*

		ELEMENTARY SCHOOLS.						MIDDLE OR BURGHER SCHOOLS.								
		Number of the						BOYS. Number of the				GIRLS. Number of the				
Number.	Names of the Regencies.	Schools.	Head Masters.	Head Mistresses.	Assistant Masters and Mistresses.	Boys.	Girls.	Schools.	Head Masters.	Assistant Masters.	Pupils.	Schools.	Head Masters.	Head Mistresses.	Assistant Masters and Mistresses.	Pupils.
1	Konigsberg,	1,427	1,466	24	125	57,735	53,214	35	86	23	2,960	11	15	12	13	1,632
2	Gumbinnen,	1,010	1,049	8	72	41,462	39,000	18	40	4	1,384	15	13	2	..	1,003
3	Dantzig,	583	607	27	22	26,219	22,936	13	35	6	1,425	3	6	2	8	675
4	Marienwerder,	942	956	23	41	33,387	28,627	13	36	8	1,353	3	11	3	5	547
5	Posen,	775	708	10	20	32,185	28,703	13	31	6	2,133	7	5	4	11	1,077
6	Bromberg,	509	535	2	13	17,892	14,692	1	5	..	130	..	..	..	..	..
7	Berlin, (the city of,)	117	120	45	233	7,490	5,641	26	44	161	3,077	54	40	48	315	4,133
8	Potsdam,	1,475	1,619	67	19	56,501	54,713	49	118	3	6,236	35	51	22	13	4,569
9	Frankfort on the Oder,	1,305	1,396	19	21	64,553	58,620	32	82	6	4,029	25	38	18	11	3,325
10	Stettin,	1,063	1,120	11	23	34,979	32,811	31	65	10	3,139	23	31	16	6	2,674
11	Coslin,	937	956	5	12	22,962	21,001	19	80	11	3,592	18	85	6	..	3,080
12	Stralsund,	388	345	63	9	7,472	6,014	21	36	..	1,232	16	5	21	1	764
13	Breslau,	1,399	1,367	23	213	72,829	71,363	36	95	27	5,835	12	16	15	8	5,138
14	Oppeln,	830	911	4	183	59,082	56,486	3	6	7	319	3	..	7	4	190
15	Liegnitz,	1,311	1,171	7	192	62,262	62,727	23	63	6	2,475	19	44	12	1	1,837
16	Madgeburg,	1,097	1,281	39	67	50,248	49,071	22	74	16	4,244	19	58	44	9	4,042
17	Merseburg,	1,129	1,217	4	75	50,712	51,049	40	92	19	7,636	35	62	9	9	7,406
18	Erfurt,	484	517	7	40	23,865	22,796	11	38	6	2,309	11	32	7	9	2,544
19	Munster,	476	378	98	63	30,177	29,585	8	9	..	397	1	1	3	2	20
20	Minden,	538	525	34	50	35,217	34,201	5	10	3	424	5	7	5	..	476
21	Arnsberg,	792	804	37	52	40,756	38,339	18	32	6	550	2	4	2	..	51
22	Coln,	468	426	46	118	28,241	25,281	4	13	6	209	1	2	..	..	13
23	Dusseldorf,	710	713	10	165	47,199	41 677	15	30	9	774	16	7	13	36	934
24	Coblentz,	891	887	29	37	38,515	36,570	13	27	8	311	1	3	4	3	29
25	Trier,	688	636	48	92	31,709	30,596	8	15	8	225	3	..	4	1	171
26	Aachen,	445	435	14	57	23,986	20,586	4	11	1	213	4	2	10	6	268
	Total in 1831,	21,789	22,211	694	2,014	987,475	920,459	481	1,179	260	56,889	349	538	289	471	46,598

TABLE V. *Census of the great Primary Normal Schools in Prussia during the year* 1831, *with a Statement of their Expenditure:*

No.	PROVINCES.	Sum total of expenditure.			Grants from the state.		
	Eastern and Western Prussia.	Thlr.	Gr.	Pf.	Thlr.	Gr.	Pf.
1	Normal School of Braunsberg,	4,440	11	9	4,149	10	9
2	“ “ Dexen,	2,846	23	6	2,250	..	..
3	“ “ Muhlhausen,	700	..	..	700	..	..
4	“ “ Angerburg,	1,590	..	..	1,300	..	..
5	“ “ Karalene,	6,656	..	..	5,980	..	..
6	“ “ Marienburg,	2,147	10	..	2,147	10	..
7	“ “ Graudenz,	2,050	16	3	2,050	16	3
8	“ “ Jenkau,	5,311	18	1	..	..	..
	Brandenburg.						
9	“ “ Berlin,	2,000	..	.	2,000	..	..
10	“ “ Potsdam,	5,430	..	..	5,430	..	..
11	“ “ Neuzelle,	11,554	2	6	6,945	2	6
	Pomerania.						
12	“ “ Stettin,	3,410	..	..	3,069	..	..
13	“ “ Coslin,	2,608	..	..	2,556	..	..
14	“ “ Bartzwitz,	250	..	..	250	..	..
	Silesia.						
15	“ “ Breslau, Prot.,	4,543	6	..	3,909	6	..
16	“ “ Breslau, Cath.,	3,287	..	..	3,287	..	..
17	“ “ Bunzlau,	3,800	..	..	400	..	..
18	“ “ Ober-Glogau,	2,700	..	..	2,700	..	..
	Posen.						
19	“ “ Posen,	4,675	..	..	4,675	..	..
20	“ “ Bromberg,	2,683	10	..	2,633	10	..
	Saxony.						
21	“ “ Halberstadt,	2,750	..	..	2,150	..	..
22	“ “ Magdeburg,	4,782	..	..	2,650	..	..
23	“ “ Gardeleben,	685	..	..	685	..	..
24	“ “ Weissenfels,	3,419	10	10	2,404	7	2
25	“ “ Erfurt,	3,706	..	..	3,255	..	..
	Westphalia.						
26	“ “ Buren,	4,494	2	..	4,127	2	..
27	“ “ Soest,	3,270	..	..	3,120	..	..
28	“ “ Petershagen,	522	15	..	300	..	..
	Rhine.						
29	“ “ Meurs,	3,000	12	6	3,000	12	6
30	“ “ Dusseldorff,	787	23	9	100	20	10
31	“ “ Bruhl,	6,809	5	..	6,599	10	..
32	“ “ Neuwied,	2,999	17	6	2,999	17	
33	“ “ St. Matthew, a village near Trier,	2,135	..	..	500	..	..
	Total,	110,553	3	8	88,323	5	6
	or	£16,583			£13,260		

TABLE VI. *Statement of the sums paid annually by the public Treasury for the Elementary and the Burgher Schools throughout Prussia:*

No.	PROVINCES.	Sums total for the year 1831.		
		Thlr.	Gr.	Pf.
1	East and West Prussia,	52,012	6	7
2	Brandenburg,	71,739	17	11
3	Pomerania,	8,957	18	1
4	Silesia,	17,796	23	..
5	Posen,	9,186	6	1
6	Saxony,	24,689	26	6
7	Westphalia,	19,889	17	1
8	Rhine,	16,655	29	9
9	General expenses,	9,390	..	..
	Total,	230,317	22	..
	or	£34,520		

THE COAL FIELD OF ALLEGANY COUNTY,

MARYLAND.

Although, since the last ten years, a good deal has been written upon the subject of this remarkable district, it has been more in regard to the mineral resources of particular localities, and to the means and prospect of advantageous development of such resources, than to the combined relations and aggregate value of the entire field. The report of the State Geologist, in 1840, may be considered as an exception in the general category; but as, since that date, fresh facts and new circumstances have contributed to increase the interest and modify the aspect of the district in question, there occur occasions enough now to collect and present such particulars as serve to show the national importance of the coal field, and are appropriate to the industrial and statistical character of our Journal.

When the existence of the predominating mineral—*coal*—in this region was first observed, the writers to whom we have referred do not seem to have inquired; nor, at this remote period, is there very likely to be found satisfactory material for such a research. The earliest evidence on the question, probably, exists in the surveys made under the Royal Commission, in 1736, to ascertain the limits and bounds of the (so-called) Fairfax grant—an original copy of the plots in which is now before us. This Fairfax grant, it is, perhaps, hardly necessary to inform the reader of American history, was originally made by Charles II., as far back as 1650, during the abeyance of the crown of England, to Lord Culpepper and others; and, under the name of the Northern Neck, conveyed all the territory between the Rappahannock and the Quiriogh or Potomac rivers. The conveyance was confirmed subsequently, by letters patent, in 1668, to new proprietors, holding by purchase or devise from the old ones; and in spite of the remonstrance of the Virginia Assembly, whose agents visited England in 1675–6, for the purpose of presenting them, it was renewed by a fresh patent of James II., in 1689, to the then sole holder of the title, Thomas Lord Culpepper, from whom it passed by descent to his daughter and heiress, who subsequently intermarried with Lord Fairfax. Fairfax the younger's survey, which we have mentioned, was professedly, and in terms, to lay off his territory *in Virginia;* but practically it led, by the taking of the North Branch of the Potomac, instead of the South Branch, (the larger and more westerly-rising stream,) as the line of search for the "first fountain of the River Potomac," to a very serious interference with the charter of Lord Baltimore, for his adjoining province, Maryland. And this interference, unsettled at the period of the overthrow of the proprietary Government of this last State, in 1775, has bid fair once or twice to create difficulties between the two—Maryland and Virginia; the one, desiring to augment her territory by a reinstatement upon the basis of proprietary rights; the other, very naturally, resisting a diminution of taxable resource and dominion, and claiming, by possession and usance, what would be difficult to establish in law or equity, were it a case of contiguous estates of individuals. It is quite probable that the discussion, although dropped for ten years past, is not settled yet; and the interest, which in case of renewal of diplomatic or legal proceedings, would attach to the Fairfax grant, may justify this long parenthesis in regard to that instrument.

In 1736, as we have said, the surveys were made up the North Branch of the Potomac, and through a part of the very coal field of which we are treating. This was many years anterior to any European settlement there; Fort Cumberland being, fifteen years later, the most western English post, and that only a military one. It is possible that the examinations made then, led adventurers, shortly after, into the wilderness beyond. For upon the surveyors' maps, none of the names at present existing are found. What was afterwards Fort Cumberland, and now (since happily a fort is no longer necessary) simply Cumberland, is there marked *Cucucbetuc;* the Shawnee Indians are spread along the base of the present Fort Hill, up the Potomac; and the name *Lorraconing* predominates over the valley, now less euphoniously denominated George's Creek. The mountains are unnamed; for the surveyors had no temptation to wander from their line in order to learn the Indian appellatives; and the daring brothers Cresap had not yet located themselves there to impart their own.

But what is of more interest to the present question, is the denoting of two "*cole-mines*," about two to five miles, in a straight line, above the mouth of Savage River, respectively. Although the coal shows itself in several places there, where it has been washed by the river-freshets and rains, it is probable, from all the circumstances, that there were actually *mines*, as the surveyors called them. In either case, whether a mere appearance or a worked mine, it serves to carry the epoch of the knowledge of the existence of coal back to 1736.

Less than twenty years afterwards, the Ohio company had opened, in part, their road from Fort Cumberland to Fort Duquesne, (now Pittsburgh,) on the Ohio—a road, connected in association with the melancholy fate of Braddock, and the earlier military experiences of Washington. From the letters and despatches at that period, we find for the more prominent geographical features the names that are current now, but nothing of coal mines, although the route passed through the northern part of the field, and in its graduation must have exposed coal strata. If it were not, then, for the Fairfax surveys, we might, for all documentary evidence, be left to suppose that the existence of coal on the tributaries of the Potomac had been, like the anthracite of Pennsylvania, of late recognition.

Gen. Washington, himself, before 1774, had made three trips between Cumberland and the Ohio, and all of them, so far as the limits of the coal deposites are concerned, pretty nearly over the route of the present National Road; the first, when it was only a pack-saddle path for the Indian traders; the second and third, after it had been made into a carriage road by the Ohio Company, and subsequently improved by Gen. Braddock's army. But yet, in the bill which he introduced into the Virginia Assembly for the improvement of the Potomac, no reference is made to the transportation of this mineral; and subsequently, when he became the chief patron of the so-called Potomac Company, whose object was the same improvement, in all the correspondence and documents which arose out of the question, the main argument is based upon the social and political importance of an easy and certain means of transit between the East and the West—between the Atlantic and the Ohio. In this respect he justly viewed it as a matter of national, not of stockholding interest, and thus there became less necessity for him to accumulate facts and arguments bearing upon the commercial value of the investment—a point, with him, of minor importance. When it is added, that the value of mineral coal at this period (1784–89) was but beginning to be appreciated in England, (from which, in spite of our political division and lately hostile attitude, we, in this country, naturally took our mercantile tone,) and could have been still less understood here, while virgin forests yet bore fuel in what are now crowded thoroughfares of the city of New York, we can see sufficient reason for the absence of details upon this point, which, although a substantial, and even perhaps an admitted one, could not justly have been made prominent.

So, when, forty years later, the Potomac Company, which Gen. Washington mainly had called into existence, was merged, after a duration almost as prolonged as the Republic that he had preserved, (the gods avert the omen!) in another institution—at first of more promise, but proportionably in fact of not more performance—the inducing arguments in behalf of the new effort, were national advantage and the emoluments from general commerce. After the means for that effort, however, became regularly organized, (1824–8,) the details of those emoluments were examined into, and presented in proper order; and then, for the first time, the resources of this coal field became matter of public discussion and history.

The new enterprise for the improvement of the Potomac and its navigable connexion with the western waters, was the Chesapeake and Ohio Canal, whose chartered route at first was, what Washington and his associates had contemplated, along the north branch of the Potomac, above Cumberland, to at least the mouth of Savage River. It would thus have passed at once through a considerable extent of the coal field, near the central and richest deposites, and in a manner to have been freighted with those deposites with the least auxiliary improvement and expense.

It is to be regretted that this project was not adhered to, and that the almost prophetic sagacity of Washington should have been postponed to newer lights. But as has happened since Æsop's day, and long before, a too far-reaching and omniverous pursuit, has often resulted in failure to attain even a more moderate and restricted aim. The magnificent idea of connecting the East and West, and of making, by human means, an enormous island of Virginia and all the States and Territories south, still absorbed the judgement of the administrators of the canal; and this, although each day the influence of any federal unity grew more weak. The tendency of the age was plainly marked to denationalize ourselves, and out of the doctrines of State rights grew the notion of the unconstitutionality of national contributions to works of Internal Improvement. So, therefore, a route whose summit-level was somewhat lower, and whose supply of water would be somewhat less precarious, was preferred, between Cumberland and Pittsburgh, and an alteration of the charter obtained accordingly.

But for all this, the recognized value of the coal field was too great for it to be given up, or availed of only to the extent that it could be at Cumberland, or in the construction of the canal northward along Wills' Creek. And one of the earliest operations of the engineers, (both of the United States, detailed for the service of the company before its actual organization, and of its own employment after organization,) was the location of a branch canal up the Potomac to the mouth of Savage, and of two railroad lines from Cumberland, up Braddock's and Jennings' Runs, for access to the northern extremity of the field.

In this device, it must be admitted, the new company did all they could to remedy the original sin in their choice of routes; they admitted and acted upon the principle of paramount control in estimating the value of any great work of intercommunication—that of *continuity* between the point where an article of general use is raised in greater abundance than can be consumed, and the point where the same article is consumed faster than it can be furnished. And because they saw that the ultimate execution of their work, in all its extent, must be long postponed, they made the more of the coal field which was to supply the revenue to the Eastern Division, until the Western should come to pour the wealth of the Great Central Valley of America out upon the shores of the Atlantic. Such were the phrases with which the hope of the few sought to strengthen the faith of the many in their really magnificent enterprise.

But it is not our intention to dwell upon the policy or history of this canal farther than is intimately connected with the coal field. It is sufficient for us to add, that, up to 1833, the principle of continuity was fully adhered to; the canal was to connect (physically and without a metaphor) the coal mines with tide water. But at the date mentioned, very little more than half the work (105 miles out of 184 1-2) was nearly ready to be opened—the remainder had not been touched; and the entire capital, and more, had been expended. An application to Congress, for aid from the National Treasury to a National Work, was refused; and in 1834, something being to be done, the State of Maryland was appealed to, to become a neighbourly creditor. In an application of such a kind, it is necessary, of course, for the applicant to define distinctly how much he wants, for what he wants it, and upon what security. This was all done. The *how much*, was two millions of dollars—a large sum in those days. The *for what*, was the completion of the first division of the canal to a nominal and technical point. And the *security*, was the revenue expected from the coal trade of the northern part of the Basin, hitherto embraced in project by railroads to be constructed by the Canal Company but now left to the mercy or cupidity of private enterprise to construct.

This northern part of the Basin, hitherto not much known or appreciated, had been a year before made more prominent in a Report preliminary to the geological survey of the State. The scientific gentlemen who made that report, finding the central or Potomac part of the field already discussed by the canal engineers, very properly chose to apply themselves to that which was less known; and, although they spoke with commendable caution of a policy which the application to Congress had already developed, namely, the restriction of design to a point short of the coal mines, yet (as very often happens) their certificate as to the coal still probably accessible, was remembered, while their caution was forgotten.

However this may be, the appeal to Maryland was successful; the loan desired was effected; the assurance of its supplying means enough for the completion of the First Division of the canal was positive; and the brilliant light, which such a project cast over the Northern District of the coal field, showed the way there to divers capitalists and others, who were desirous of investing money or skill to advantage, and who yet remain to earn, according as events may issue, the title of sanguine or of far-seeing. With the introduction of these parties, which may be dated in 1835–6, commenced a prolific literature for the coal field. The names of Silliman, Ducatel, Renwick, Douglass, and several others, (*arcades omnes*,) are found upon its pages, and attest the respectability of the contributions. It is from such contributions, aided by recent information from residents of the district in question, that our present review is made up.

Geographically defined, this coal field may be said to extend from the summit south of the upper waters of Wills' Creek, between four and five miles north of Mason and Dixon's Line, in a general direction about south 30° west, to the very sources of the north branch of the Potomac—a distance of almost sixty miles. Bounded on the northeast by the ridge that divides the waters of Gladwin's Run from those of Jennings' Run, (both tributaries of Wills' Creek,) it is limited on its northwest and southeast sides by the Savage and Dan Mountains respectively, and closed up at its remote southwest end by the *col* which unites these two mountains; and west of which their distinctive appellations are merged in the name of the Eastern Front Ridge of the Alleganies. The width of the field, as long as it embraces the valley of George's Creek, (say for about twenty miles,) is not more than five miles; but as it is carried up the Potomac, it is no longer restricted to the glen proper of that river, but sweeps up the valleys and through the dividing ridges of its tributaries, until, from the head waters of Stony River to those of the Potomac, it attains to a width of more than ten miles, and almost to the shape of a Delta.

As far as George's Creek and the Potomac are concerned, the field is one continuous valley, where two synclinal slopes intersect at Western Port; but that portion of it to the extreme north, containing Braddock's and Jennings' Run, is cut off (as it were) by the *col* or cross-ridge which separates the waters of these last mentioned runs from those flowing into George's Creek. This saddle or *col* is the result of two spurs, mutually putting off from Savage and Dan Mountains in such a manner as to form one nearly straight ridge, parallel to the plane of the meridian. The level of this ridge, upon the part of which, abutting against the Savage, the town of Frostburg is built, is quite persisting, and is probably nowhere less than nine hundred feet above the lowest part of the coal basin at Western Port.

This physical feature of the surface makes in fact two districts of the field—distinct in aspect and accessibility—and equally the means of transporting the products of either to a foreign market must be distinct for each. But this point does not seem to have been as well reflected on in devising the projects of intercommunication, as, in theory at least, it deserves; otherwise, the policy of the canal company, until 1833, would have been subsequently adhered to, with even more reason than it had when first adopted.

The extent of the two districts, so constituted, is very different for each. The Upper or Northern District contains, as nearly as can be ascertained, forty-two square miles of coal field; the Lower or Southern, 239 square miles: their aggregate is 281 square miles. The geological distribution of the strata renders these relative extents still more disproportionate in regard to the respective quantities of coal.

The hydrology of this field does not appear to have been particularly examined in the scientific explorations which have been had. It was supposed, probably, that the abundance of coal would render the use of steam-power more economical for machinery than water wheels. However this may be, it appears that the average inclination of the drainage plane of the Potomac, down to Western Port, is about fifty feet per mile; that of George's Creek, about sixty-five feet per mile. That of Braddock's and Jennings' Run must be, judging from the grades of the railroads located along either stream, considerably more—probably not less than one hundred feet per mile.

As to the hydraulic power of the several streams, all that is known is that the Potomac, just above the mouth of Savage, yields 6,360 cubic feet of water per minute; the Savage itself, 2,760 cubic feet per minute: their joint supply, therefore, below the mouth of Savage, amounts to 9,120 cubic feet per minute. The total mechanical effect of such a quantity of water combined with the fall along the two miles from Savage to Western Port, would be equal to 125 horse-power nearly, or rateably about 62 horse-power per mile. The power of the Potomac, just above Savage, although the quantity of water is absolutely less, is yet, in consequence of the increased fall, quite as great, or even greater. Assuming the fall of fifty feet per mile, it ought, in strict theory, to give a power nearly ninety-five per cent. more, or about 120 horses per mile.

On George's Creek, at Lorraconing, the yield is stated to be 3,600 cubic feet per minute; which, with the average fall, would be equivalent to eighty-eight horses for every mile between that place and Western Port. Above Lorraconing, this equivalent must be considerably diminished. Of the quantities of water in Braddock's or Jennings' Run, there is no account. They furnish, however, but a very small proportion of the whole quantity in Wills' Creek; which, guaged at a point in the Narrows one mile above Cumberland, was exactly the same with that of George's Creek at Lorraconing, viz: 3,600 cubic feet per minute.

How far the districtive ridge or *col*, which has been just now mentioned, affects the geological deposites of this field, has not been discussed. In general, the scientific investigators have regarded the strata as continuous, and, when they have mentioned this ridge, have spoken of it as a mere superficial feature in the physical geography of the basin. As it is not our object here so much to present new views, as a *resume* of those which have been advanced by professional investigators already, we shall abstain from entering into details on this point. But it may be properly remarked, in suggesting it, that the weight which attaches to it, will depend upon the ideas which any one is at liberty to adopt as to the mode of formation of the ridge in question, and the agencies which were at work to produce it. If, for instance, it be regarded as a saddle of *denudation*, as many of the mountain spurs in the neighbourhood will be admitted to be, there is no reason for supposing that the stratification, on either side, is at all affected by its existence. But, if it should be considered as a feature of *elevation*, arising from some extending force below, as may be predicated of some of the ridges in the neighbourhood, (Wills' Mountain for example, and other mountains to the eastward of it,) then there would be *a priori* ground for expecting an alteration in the symmetry of the strata on one or the other side of it. Now it may be added to this, that so far as the (at present disjoined) levellings go, such a want of symmetry does appear to exist. By *disjoined* levellings are meant, such as have been made at different times, by different persons, and not referred to one base mark of universal recognition; and such appears to be the character of the levels hitherto taken through the field. Southwest of this ridge, through the entire Southern District, (for all that is known,) there seems to be a great regularity, or rather symmetry, in the curve of the strata, both longitudinally and transversely. But northeast, and in the Upper District, such regularity is at least not so striking. Indeed, so much is it the reverse, that in one of the earliest examinations, and with surveying instruments, the conclusion was arrived at, quite positively, that the assumption of the coal beds at Western Port being continuations of the beds at Frostburg is extremely improbable; and that "the Allegany coal, unlike almost every other coal formation, is *conformable*, and not in a basin shape." It is true that this opinion may have been advanced upon a too local and restricted examination. But there is another particular, which seems to have been generally confirmed by all the explorers, and which relates to the same point, viz: that of the beds thinning out in the northern region, and becoming there more intercalated with slate. So much is this the case, as regards the latter category, that, in another of the earlier examinations, we find announced the existence of an eight-foot bed of coal at some ninety feet below the main coal at Lorraconing, while its identity with the main coal of the Frostburg region is left an open question. But this announcement turned out to be premature; for, upon further penetration of the supposed bed, it became developed in two distinct strata of coal, with one of slate interposed. But the other category still remains uncontradicted; and while the argument from the characters of the associated strata compels the belief that there is but one main coal in the field, nevertheless that main, is, in the Southern District, from fourteen to sixteen feet in thickness, (some of the observers of the geographically central portion on the Potomac, say twenty feet, even,) and in the Northern, only ten feet thick. This tendency to thin off at the edges, however, (which the ancients called a *lecanolepty*,) may be explained strictly in accordance with the mechanical principles accepted for geology.

Leaving, therefore, out of view for the present, in the geological aspect of it as a coal basin, all reference to the district into which, in other aspects, it may be regarded as having been divided, the whole area of 281 square miles may be supposed as having been once filled with alternating deposites of sandstones, slates, shales, coal, and iron ores, stratified with considerable parallelism and great regularity in an aggregate thickness of about 1,300 feet. From the edges of the basin, which have been already defined, these strata curve downwards, in all senses, to an imaginary centre, which does not seem to coincide in position with either the mechanical or geographical centre. Either of *these* centres would be above the mouth of Savage; the geological one appears to be not far southwest of Lorraconing. At least, the beds there are reported to be lower than in any other part of the field; and in levelling along the outcrop of any given bed, it is found to rise in all directions from the place referred to. Rating the rise along two rectangular co-ordinates, the one axial, the other transverse, the former may be stated at about thirty feet per mile, the latter about two hundred and fifty feet. Of course, these are to be taken as an average; and it will be borne in mind, that in all such basins, the inferiour central portions tend always nearer to horizontality than the external lateral portions.

The position of the basin itself, considered as disconnected from the older rocks on which it reposes, has not been determined. It is supposed to be horizontal, or very nearly so. Such a position would correspond with that of the keel of a boat upon a level beach; and the whole formation may be illustrated popularly, by comparing the arrangement of the strata to the structure of the sides of a canoe, or of one of M. Francis' beautiful sheet-copper life-boats. * Of course, it will be remembered that a horizontal section through those strata, would not present the oval shown by one through the boat; instead of an oval, the coal basin has the shape of an irregular trapezium, or, if projected upon a very small scale, almost of a triangle.

Near Western Port, the Potomac has cut down to the lowest members of the coal series; and not far below, the whole group is shown, resting upon the red sandstone. It does not seem determined whether the millstone grit, the usual inferior stratum in European coal groups, exists in this. It is, at all events, very thin, even in the northeastern extremity of the basin, where it is affirmed to exist; and at Western Port, it is not visible at all. It was this, probably, which led some of the earlier observers in this district to indicate the anomaly, and to express the opinion that the millstone grit, which is found capping both Dan and Savage Mountains unconformably, was there, from (what we may in looseness of phrase call) the beginning. Others, seeing that the conglomerate in the Pennsylvania anthracite formation is many hundred feet in thickness, while the utmost that can be claimed in the northern extremity of this field is not more than forty feet, have suggested that it has thinned out, and have generalized into a reduction in size of all the formations of mechanical origin as we proceed westward.

In passing along the Potomac upwards, towards Western Port, marine fossils occur in the red sandstone similar to those which are found in the transition limestone lower down the river; but, after passing the red sandstone, the fossils become all fresh water. A very interesting particular, however, has been noticed recently by Mr. Lyell in the northern extremity of the basin—a black shale, full of marine shells, resting on a seam of coal about three feet thick. The position of this is about 300 feet below the principal coal seam. The shells are nearly all either identical with, or in close affinity to, species found in the Glasgow and Yorkshire coal measures.

In regard to the impressions of plants, which are very numerous throughout the basin, the same observer is of opinion, that two-thirds of them are the same with species well known in the European coal formations. This is a greater proportion than is found in the comparison of animal remains, as might be expected: it is also greater than would be found for the specific resemblance of the existing carboniferous floras of America and Europe.

Not to weary our readers with an enumeration of geological incidents, we shall pass now to the consideration of the coal measures themselves, or of the occurrence, association, number, thickness, and other circumstances which affect the coal strata or the extraction of their contents. These coal strata are found almost at the very bottom of the formation—among the lowest number of the series; and in the 1,100 feet which have been explored, there have been identified twenty-seven beds, making in the aggregate a thickness of seventy-six and two-thirds feet. Of these, sixteen beds are less than three feet in thickness, five beds more than three feet but less than four feet, of which last there are two, one four and a half foot bed, two of six feet, and one of fourteen to sixteen feet thick. These measures appear to have been all made in the Southern District; those in the Northern District not being sufficiently connected to authorize either their identification or interpolation without risk of error. Upon the hypothesis, however, of a continuity of deposite throughout an entire basin, there is no reason to expect a deficiency in measurements taken about its centre; indeed, the opposite is rather to be anticipated.

The actual aggregate thickness of the beds less than three and a half feet, is thirty-two feet; and although several of them are separated but by soft slate, and therefore would admit of being worked together, yet the estimate of the State Geologist, which was probably formed upon these very data, and upon the assumption that no coal would be worked (at present at least) under three and a half feet, appears every way worthy of adoption. This estimate gives the available beds as amounting in thickness to forty-five feet, or fifteen yards.

A comparison with the English coal measures will show this formation in a very favourable light. In the main Scottish coal field, for instance, which has been pierced to the depth of 704 feet, there are found but twenty-four beds of coal, varying from two inches to five feet, and amounting altogether but to fifty-nine and one-third feet. In the great Newcastle field, a detailed section through 736 feet shows but fifteen beds, containing in all but twenty-two and one-third feet of coal; of these, eight beds are only nine inches thick, or less, while the thickest, or *Benwell Main*, is but four and two-thirds feet. The others, celebrated in this formation, are the Beaumont Seam, of three and one-third feet—the *Low Main*, of very nearly three feet—and the *Hutton Seam*, or *Low Low Main*, of two feet ten inches. The aggregate of the South Wales coal formation is reckoned, to be sure, to contain ninety-five feet of coal in twenty-three distinct beds from eighteen inches to nine feet; but deducting the beds less than three feet, there are but seventy and a half feet. And this occurs in a section more than three times as great as in Allegany.

The greatest aggregate of coal measures known in the world, is in the neighbourhood of Paisley, where they are no less than 100 feet in all; but the largest seam is only nine feet thick. As for the *ten-yard* vein (as it is called) in Staffordshire, it is, in reality, an association of seven different beds, yielding rather less than twenty-five feet. Regard then being had, as well to the maximum size of single beds as to the aggregate thickness of all, the Allegany measures will be found not only to bear a favourable comparison with others, as we said at first, but to be nearly or quite unrivalled.

The available thickness to which the aggregate measures have been reduced by the geologist, extended at one time, most probably, over the whole area of its formation; and to ascertain the cubic quantities, it would be only necessary to multiply that area by the thickness. But the same causes which have been active in modifying the surface of the region—which have given valleys for the principal streams and tributaries, and varied the profile of the mountains as we see them now—have also destroyed a considerable portion of coal. The estimate of the same observer, in this particular, gives for the central portions of the field a denudation at the level of the main coal of rather more than twenty-three per cent.

Of course, beds above that level have lost more—beds below, less. It also is to be borne in mind, that the data for this estimate were furnished in the most favourable locality, the centre of the basin, and that, at both extremities of the formation, the agency of water in washing away the original deposites is much more conspicuous. We may presume the geologist, however, to have allowed due weight to these considerations.

Applying, therefore, his correction for denudation to the given area of 281 square miles, we have left, as underlaid with available coal, 215 square miles or, in round numbers, 138,000 acres, with coal fifteen yards thick. In the common way of working, this would yield about 50,000 tons per acre, or about 32,000,000 of tons per square mile; a quantity greater than the enormous annual consumption and waste of Great Britain and Ireland, now supplied in that country from nearly twenty different fields.

In the comparison just now made between the British and these American measures, no mention was made of a very important particular in estimating the comparative value of the two. This is the position of the coal seams in regard to the surface. In all the British mines, the whole or the greater part of the coal beds are far below ground, at depths varying from thirty to sixteen hundred feet. And, as a consequence, a vastly enhanced expense has to be incurred in the apparatus for lifting the coal up such a height, as well as for draining the mine of the water which is continually pouring into it. The Allegany measures are in circumstances which exempt them entirely from either of these arrangements. Over the greater part of the formation, all the coal and the main bed, (with two others, the next in thickness to it,) everywhere are *above* the water level. Instead of sinking shafts, the seams are entered by adits or galleries, nearly horizontal, and whose inclination is just about enough to allow all the accumulating water to run off by a side drain. The comfort and safety to the miners in a working of this sort, above any deep shaft work, is easier to be understood than to be expressed: and the advantage to the proprietor may be easily conceived, in having his coals transported to the mouth of the mine upon a gently declining railroad where the sole demand for moving power is to overcome the friction of the wagons, instead of bringing them up to the light of day, by the intervention of an enormous steam engine which has to encounter, in its vertical lift, the combined opposition of friction and gravity. Hence it is that in Wales, the region of cheapest coal, although the wages of labour are there about one half of what they are in America, the cost of coal in daylight is nearly twice as much as here.

The facility of spontaneous drainage exists universally throughout the Southern District, where the natural valley is longitudinal in regard to the basin: in the northern, where the main valleys are transversal of the basin, it depends on which side the headings are carried in. In some mines, the strata may be dipping in the direction of the heading, and the water of course follows the workman, but so faulty a direction is always possible to be avoided without much increase of expense.

The composition, characteristics, and qualities of the coals from these measures have been tested by chemists and analysts, by metallurgists, with locomotive engines, and on those world-wonders—the Atlantic steamers; and the verdict is, we believe, unanimous, that they resemble almost to identity, the best kinds of the best Welsh coals. The main, or five yard coal, is sufficiently caking to allow all the slack to be made up into coke;

and, at the same time, not too bituminous to prevent its being used in a raw state (a rare example) for the smelting of iron ores. A six-foot or two-yard bed, which is the lowest of all in position, is said to be the most carbonaceous; and a bed of four and a half feet, lying some thirty yards above the main coal, presents a striking physical correspondence with the Lancashire cannel coal.

As to the other useful minerals associated with these coal measures, the limits of this article compel a brief notice only. Of iron ores (largillaceous carbonates of iron) there appears to be no want; thirty-three feet in thickness have been identified. Their practical use has not been very extensive as yet, but satisfactory as regards both quantity and quality. These ores can be relied on, in large and mixed, to yield thirty per cent. of metal; and the quality of the castings at Lorraconing and the bars at Mount Savage has been quoted with encomiums by competent judges.

Besides these regularly stratified beds of iron ore, there are also occurring, not unfrequently, accidental deposites of brown hematite, which have been found of advantage and economy to be mixed with the other ores. Nor can we omit to mention, although not within our strict geographical limits, an ore lying on the eastern flank of Wills' Mountain, which has not long since been applied at Mount Savage. It is presumed to be the same with the ore at Danville, Pa.; its position and associations agree very nearly with what Prof. Rogers has given in regard to this latter in his Geological Report of Pennsylvania. From the great abundance of marine fossils in this ore, it has come to take the name of *fossil ore*. These fossils answer also another purpose, viz, that of diminishing the quantity of alkaline flux necessary for reducing the ore.

To return to the coal basin proper, we should not omit to mention the fireclays, which furnish abundant materials for a beautiful firebrick; some of the slates, associated with the ores, are found of excellent constitution for giving an edge to the softer classes of steel tools; and others, more nearly allied with the coal seams, would yield, upon simple treatment, an excellent black chalk. Of limestones, either for metallurgic or architectural, or agricultural purposes, there is a great plenty; and no inconsiderable thickness of beds turning out a handsome black marble. The quantities of easily accessible common building stone, are said to be inexhaustible; clays suitable for bricks are very extensively spread over the surface; and woods for building or ornamental purposes, exist in an abundance, upon which the population of the region hitherto has not made any sensible impression. Such are the principal particulars worthy of note in a physical description of this coal field.

We must now retrace our steps for a moment, in order to complete the historical view of the subject, and show how the resources, which have been described, have been so far availed of. In 1836–7 there were eleven charters, held by parties owning portions, more or less, of the coal field. Of these, six were situate in the Northern District, and five in the Southern; and of these five, one of them (which had been obtained in 1834, and was probably supposed to be behind the age in 1836) was permitted virtually to expire—leaving but ten chartered institutions. Of these, six have published one or more reports of their property, proceedings, and prospects:

The first to begin any actual operation, was the George's Creek Company, who, in 1837–9 at Lorraconing, a new village springing up under their auspices, erected large works for the production of crude and cast iron, and at the same time made more extensive operations in mining, both for coal and iron, than had hitherto (or perhaps even have as yet) been effected elsewhere in the region. But the unfortunate and continued failure of the canal to be extended even to Cumberland, and the consequent absence of any communication with a market for their productions, induced, about 1840, a closing up of the works of this company, in which state they have continued ever since. A short operation, last winter, with the blast furnace, was represented to have been an experiment on individual account. It is to be presumed that it was not satisfactory to the parties engaged, as it was not prolonged.

In 1840, the Maryland and New York Iron and Coal Company commenced an enterprise at a place now well known as Mount Savage, situate on Jennings' Run. Beginning at a more fortunate period in the cycle of improvements, they found the Baltimore and Ohio Railroad completed to Cumberland at the time when they were ready to make avail of a means of transportation; and the relations of that railroad and the canal companies were, also, such that the former found a motive to reduce their prices very nearly to the scale hitherto supposed peculiar to water transportation. Of course, there was every reason to avail of the circumstances; the Mount Savage Company constructed, in due time, (Dec.1844,) a branch railroad to connect with the Baltimore and Ohio Railroad; and having every thing that can be desired in plan, management, and connexions, it is to be supposed that nothing is wanting, but time, to bring about the fruition of all those expectations under which the proprietors of the institution invested their capital.

Late in the spring of this year, the Maryland Mining Company, a corporation whose estate lies on the southern verge of the Northern District, undertook the construction of a railroad from their mines to Cumberland, which it is probable will be finished before winter. And, at the moment of writing, the public news makes the announcement that the Boston and New York Coal Company, (which owns near the centre of the Northern District,) and the George's Creek Company, (whose immense estate stretches from near the mouth of Savage in the South, across and over the dividing ridge into the Northern District,) are about constructing branch roads to connect with that of their sister incorporation. Another company, whose correct appellation has not reached us, is also either engaged, or about to be so, in constructing a continuation of the Mount Savage Railroad to a mine near Frostburg. On this last road, the motive descending power is to be gravity, and the empty cars taken back, as at Mauch Chunk, by animal force. Its grade, therefore, must be more steep than that of any of the roads, either made or about to be made, whose inclinations vary from 100 to 135 feet per mile.

From the details which have been given, it will be seen how much the development of this coal field has depended upon communications with the Atlantic board. Not that the commercial importance of the field might not have warranted the construction of such a communication all the way through, from the mines to the tide; for in Massachusetts, or in New York, even, the discovery of a coal deposite, having but half the advantages of this one, would have sufficed for a canal or a railway, of 300 miles even, being forthwith built by acclamation: not that the interest and wealth embarked in, or that could have been invoked for this region, could not have effected the aim, had the way been otherwise open: but unfortunately in Maryland, where corporations grew in the statute-book almost in the proportion of the increase of the population in the territory, the power had been given to other parties, whose gaze, as we have already said, was so steadily fixed upon the remote perspective of the West, that the Appalachian treasures midway were disregarded. There is, therefore, the more reason for presuming that the region, so long kept back for want of *any* communication with the East, will progress all the more under the prospect which is now held out of *two*—a railroad and a canal. The former of these is already not far from the Northern Coal District; and its presence has inspired the collateral enterprizes which we have just mentioned. The latter, after languishing for many years, under hope deferred and efforts postponed or vain, is at length, and recently, giving unequivocal symptoms of some crisis in its destiny.

It would be not without interest, nor without reference to the proper matter of this article, to enter farther upon the details of both these works, as auxiliaries to the coal region, and to speculate upon the law of development to which their actual or hypothetical conditions ought to give rise; but our readers have, no doubt, by this time, had their attention sufficiently exhausted. On some other occasion, inducement may, perhaps, be found to revert to the theme, which we dismiss now, with the expression of the belief, (confirmed by all our investigations and inquiries,) that no other locality in the United States holds out a fairer prospect of a remuneration, for time or capital, than this coal field of Allegany county, Maryland.

STEAM AND WATER AS MOTIVE POWERS.

To the Editor of the National Magazine:

Sir:—I have read, with much interest, your article in the fourth number, page 358, headed "Advantages of Manufactories in the City of New York." I agree fully with the editorial remarks in general, and also with very much as stated by General James, in his address at Portsmouth, N. H., as sound, feasible, and particularly deserving the serious attention of "capitalists and owners of real estate in seaport cities and towns;" yet there are some exceptions to the comparison of Water and Steam, as motive powers, for manufacturing the coarser qualities of cotton fabrics, not sufficiently set forth to do Water Power justice, at the prices it can be obtained at, out of New England. With your permission, I propose to submit, for the consideration of your readers, some remarks and calculations upon Water and Steam compared.

In page 362, you very properly say—"Information can be obtained to a mathematical certainty, as to the necessary outlay. The thing is no longer a matter of experiment," and permit me to add, no longer a matter of opinion, because there are practical results to refer to. Steam Power, for manufacturing the finer qualities of cotton fabrics, under the "supervision of practical scientific men, can be operated to good advantage in cities and towns contiguous to ship navigation," without injury to Water

Power in "country villages." There is sufficient demand for the beneficial employment of each motive power, if skilfully adapted to the manufacture of fabrics and articles most suitable to that power. At present there is no necessity to array Water and Steam Power as antagonists, both Water and Steam Power can be used to advantage under the judicious and skilful management of the scientific American manufacturer, in making a superiour article, so as to successfully compete with any foreign manufacturer, of a like fabric, and particularly so, in the coarser fabrics which require considerable motive power, obtained from water at less expense than from steam. For the purpose of making this comparison, the Cohoes Water Works will be selected, where there is at present a large amount of permanent summer Water Power for sale, or to lease; and, in order to enable your readers to fully understand an equitable comparison and appreciate the value of Water Power, as furnished at the Cohoes, it will be necessary to give a brief outline of its location, the extent of the permanent summer Water Power, the present population, the cost of erecting buildings, together with other advantages it possesses for manufacturing operations. By reference to the map of Albany county it will be seen, that the village of Cohoes is situated on the southwest side of the Mohawk River, in the immediate neighbourhood of the villages of Waterford and Lansingburgh, at the junction of the enlarged Erie and Champlain Canals, near the confluence of the Hudson and Mohawk Rivers, about four miles northwest from the city of Troy, and nine miles north of Albany. The village of Cohoes, embracing its unrivalled manufacturing resources, is bounded on all sides by navigable waters and railroads. The enlarged Erie and Champlain Canals run through the Cohoes Company's property. The railroad from Boston, by way of Troy and Schenectady, to Buffalo, runs on the south boundary of the Company's estate, thereby furnishing daily communication, at all seasons of the year, with some of the great leading avenues to the most important markets of the country. Vessels adapted to the enlarged Erie Canal, are suitable craft for navigating the Hudson River, discharging and reloading their freights alongside the factories of the upper and lower tiers, and not to exceed one hundred rods from the centre of the village. At this spot nature seems to have crowded all that is beautiful and sublime. A more enchanting view is not to be seen in the State, if in the United States. From any part of the village may be seen the celebrated Cohoes Falls, which, if inferiour to the renowned Niagara, have nevertheless a pleasing grandeur. On the east boundary of the Company's lands this noble river divides into three several branches, forming, at the outlet, three beautiful islands, as so many witnesses to its alliance with the mighty Hudson. The whole scenery for several miles, between the hills and valleys of the Hudson and Mohawk at this place, is indescribably picturesque; and it is as healthful as beautiful. The population of the village of Cohoes, at the present time, is near three thousand, and, with the contiguous villages of Waterford and Lansingburgh, including a radius of some mile and a half, exceeds ten thousand inhabitants; with a radius of about four miles, it would include the city of Troy, together containing upwards of thirty-five thousand inhabitants, and with a radius of less than ten miles, would include the cities of Albany and Schenectady, together containing upwards of one hundred thousand, who, whenever needed, could furnish operatives, of every class, in number and capacity to any extent. Their general character and qualifications will compare favourably with those of a like class of persons in any part of the United States, and, in general, far superiour for manufacturing purposes to the majority of the surplus labourers in the cities and towns on the Atlantic.

In this part of the Mohawk Valley, and other places at the junction of the canals, and near the confluence of the rivers, is a beautiful, wide, extended area of a very gradual descent, exceedingly favourable for erecting mills, factories, furnaces, houses, and other buildings, to an almost unlimited number, at a trifling expense in excavating foundations and forming streets; for throughout this section of country, at 12 to 18 inches below the surface, is found a dark shale rock, easy at top to penetrate with the pickaxe, and which constitutes the bed of the river, as well as its dark, bold, rocky banks. Good hard bricks are delivered on the spot for $3 50 per thousand; substantial stone foundations are built for eight cents per cubic foot; lime and lumber are delivered upon the premises at from five to ten per cent. less than they can be procured for in New York city of like quality. Masons, bricklayers, house carpenters, and labourers, are abundant at reasonably low wages. The stoppage of the enlargement of the Erie Canal has furnished these necessary helps, to any extent. Saw mills, machine shops, blacksmiths, iron foundries, and every implement for building purposes, are already to be had on the premises. The fifth large brick factory, now in course of erection in the village, two hundred by fifty-two feet, and four stories high, is estimated by the owners to cost from ten to fifteen per cent. less than such a building could be erected for in cities, and the like proportion holds good for any other building.

The Water Power at the Cohoes village is formed by constructing a dam, upon a rock foundation, across the Mohawk River, at the head of the rapids, some half mile above the falls, commanding the entire waters of the river, with one hundred and twenty feet perpendicular fall, from the surface of the water in the upper canal, at the Harmony Cotton Factory, to the tail race of Mr. Simon's axe factory, at the State Dam below the Champlain Canal. This fall, of one hundred and twenty feet, below the Harmony Cotton Factory, embraces an area of about five hundred acres, lying within the Company's property, and the ground has such an easy declivity, or gradually sloping descent, as to admit of subdividing the whole fall into six tiers of factory locations, giving an average of twenty feet head and fall to each tier, so that the entire permanent summer yield of the river can be worked over, six separate times; the tail race for one tier of factories forms the canal for supplying another tier, and so on, to the last range of sites. The water from the river is conveyed in a large substantial canal, between the head gates at the dam and the Harmony Cotton Factory, which is about one mile in length, running parallel with the enlarged Erie Canal, and in one place, for a few chains distance, not above two rods from it. The bed of the river below the falls, opposite the first factory location, on the upper canal, is at least ninety feet below the surface of the water in the canal; so that from the first to the last factory location, every mill site is far enough from the river to be perfectly protected from freshets of every description. The supply of water is regulated to the demand, supplying the motive powers with as much regularity as it can be furnished by any

Steam Power whatsoever; because, if required, the water is furnished every working day and night in the year; the permanent summer power is always at command, ever ready, being furnished by nature to subserve the designs of man. The minimum yield of the Mohawk River has been ascertained, by actual measurement, to be upwards of one thousand cubic feet per second, and by using the reservoir room in the bed of the river above the dam, together with all the artificial canals for saving the water during the nights, in seasons of very dry weather, the minimum permanent summer water power is fully equal to 1,500 cubic feet of water per second, exclusive of surplus water for eight or nine months in the year, which may be drawn to any extent, being unlimited in quantity, leaving the permanent Water Power, at the least estimate, to be 1,500 cubic feet of water per second, drawn upon eighteen feet overshot water wheels. Now, 1,500 multiplied by 18, is equal 27,000 product of water and wheel. A Lowell mill standard, or mill power, is 680 product of water and wheel; and 27,000 divided by 680, is equal 40 Lowell mill powers. A Lowell mill power is defined to be sufficient power to operate 3,584 throstle spindles, with all the machinery necessary to make the yarn into cloth; and 3,584 multiplied by 40, is equal 143,360 spindles for one tier of factories; and 143,360 multiplied by 6, is equal 860,160 throstle spindles for the minimum permanent summer Water Power, being about three times the permanent summer Water Power of Lowell. From this brief description of the capability of this magnificent Water Power, your readers can easily believe, that, by using the water so often, the Cohoes Company can afford to be liberal in their charges, and allow to each factory sufficient water and a large building lot, at very moderate prices, and yet reserve to themselves a sufficient sum for profit, before they have appropriated and leased all their permanent and surplus water, and occupied and sold all their lands for canals and building purposes, or otherwise.

On a careful survey of the docks and other premises, proper for factory locations, in the city of New York, or on the opposite side of the rivers, it will be found, on many considerations, better to pay a small sum for cartage, and select the situation with due regard to all the interests of hands and otherwise, than to locate upon a dock; for, by proper inquiry, suitable premises may be procured in the immediate vicinity of help, equal in extent to the premises occupied by the Bartlett Mill No. 2, at Newburyport, Mass., for about $5,000, while premises of less extent, if located upon a dock having only about seven feet water at full tide, would cost at least $15,000. The difference in interest on the first cost would more than twice pay the yearly cartage to and from the factory, and in every instance the dock would be the worst situation for accommodating the required help. The following is the actual expense of operating a steam engine, of the most improved construction, in No. 2 Bartlett Mill, at Newburyport, Mass., used for manufacturing the finest cotton fabrics, with cylinders 12 5-8 inches diameter, working pressure of steam on the piston about 40 lbs. to the square inch, length of stroke 4 1-2 feet, and number of double strokes 73 per minute; estimated by the owners and makers of the engine to be about 100 horse power, and daily expense for working, about 12 hours per day, $17 25. This is made up from the following particulars, viz: coals $9; engineer and assistant $3; oil, tallow, &c., $1 50; 3 per cent. on the sum of $9,000, to perpetuate the engine, boilers, chimney, &c., in good working condition, is, per working day, 87-100; and interest, 10 per cent. on the sum of $9,000, is, per working day, $2 88; making the aggregate daily expenditure as above stated, which for the year, 312 working days, multiplied by 17 1-4, is equal to $5,382. To this sum must be added the interest on the building lot, estimated, lowest cost, $5,000—yearly interest $350; cartage to and from the factory, coals, and all other things included, about 1,100 tons, at 25 cents, is $275, together $625; this sum, when added to $5,382, is equal to $6,007, or the yearly expense of the motive power is about $6,000, which includes the warming of the factory, and all other expenses connected with this comparison of motive power. The Cohoes Company charge for their Water Power, with leases in perpetuity, $125 per year, for a standard mill power, of 135 product of water and wheel, defined to be sufficient power to operate 720 throstle spindles, with all the machinery necessary to make the yarn into cloth. This, when estimated by the standard of the improved steam engine, as stated above, is about 15 1-3 horse power, and as 15 1-3 : 125 : : 100 : $815, the yearly water rent, equal to the power of the steam engine. This charge for Water Power includes the building lot for the factory, fuel for one year to warm the Harmony Cotton Factory at the Cohoes, which is somewhat larger than No. 2 Bartlett Mill, including anthracite coals, wood, and charcoal, about $935. (No freight or cartage on wood and charcoal,) freight to and from the factory including the anthracite coal, is about 600 tons per year at $1 25, is equal $750. The first cost for a water wheel with a capacity equal to the power of the steam engine, embracing first motion, penstock, gates, wheelpit, &c., all completed, as per contract, now under hand at the village of Cohoes, is about $5,000. If all circumstances be taken into account, this sum is not more than sufficient to balance the difference in the first cost of a building about the size of No. 2 Bartlett Mill, which equalizes the expense in the building of the two factories, making the aggregate yearly expense for Water Power, fuel for warming the factory, and yearly freight, the sum of $2,500; or the cost of steam is to water nearly as 2 1-2 is to 1, or 5-12; and this is the most favourable comparison for steam that can be instituted, for it only estimates the expense of motive power for 12 working hours in each 24, while the Water Power is furnished nearly the whole year, night and day, constanly running, ever ready for use, without a moment's delay, or any additional charge.

It is this advantage, chiefly, which enables the American manufacturer of the coarser fabrics, to compete successfully with the foreign manufacturer of a like article in all the foreign markets. The following statistics will satisfactorily explain some seeming discrepancies in the first cost per spindle for water mills, for the coarser fabrics, when compared with steam mills making the finer fabrics. In page 362, General James states, the two Bartlett steam mills at Newburyport, Mass., operate about 17,386 spindles, "manufacturing something less than two millions of yards annually." This cloth is made from No. 40 to 50 yarns, producing from each spindle about 110 yards of cloth annually. But in mills operated with Water Power, making shirting and sheeting, from No. 14 yarns, the annual produce from each spindle is at least 440 yards of cloth; when manufacturing cloths from No. 22 to 30 yarns, the produce per spindle is upwards of 300 yards, and, from No. 35 to 40 yarns, the produce per spindle is nearly 200 yards of cloth per year.

In steam mills, spinning yarns of Nos. 40 to 50, making the finer cloths, they require about 50 spindles to each loom, with only an equal proportion of other machinery. But in water mills, spinning No. 14 yarns, they require a loom for each 30 spindles, with an equal proportion of all other machinery; from No. 22 to 30 yarns, a loom to about each 38 spindles, and from 35 to 40 yarns a loom to about each 45 spindles, with other machinery, in like proportion. Hence, the first outlay for a mill of 10,000 spindles, to be operated by water, for making the coarser fabrics, may exceed the first cost of a steam mill with the same number of spindles, yet the annual returns from the looms per spindle in the water mill, will bear a very favourable comparison with the steam mill, showing a basis for a somewhat better dividend than can be fairly exhibited in favour of steam, notwithstanding some of the water mills may be situated in a country village, ice-bound on cotton freight and manufactured goods for one-third of the year. But that is not the case at the Cohoes, where the Great Western Railroad joins on to the village, with its branches spreading to the south, east, and west, giving to this Water Power a central location, easy to communicate with every section of the country at all seasons of the year. Railroads tend to lessen the difficulties of transit with inland locations, in about the same ratio as the reduction in expense of motive power by the great improvements in the steam engine, and are the iron links for uniting Water and Steam Power, and when judiciously operated, under "practical scientific men," rank pre-eminent amongst the modern improvements in purifying the public morals, and particularly so in crowded seaport cities and towns, by furnishing profitable employment to the thousands of the industrious poor, while they at the same time add millions annually to the products of our country; above all other things tending to enhance the agricultural interest, by opening a more certain and permanent home market for the productions of the soil. This is self-evident, back in the country, for several miles surrounding a village or town created and sustained by Water Power manufactories bringing an increased population, creating an increased demand for every article of farming produce, and raising the value of real estate. In no place is this more perceptible than in the neighbourhood of the Cohoes. The liberal policy of the owners of this magnificent Water Power has attracted the attention of the capitalist, of the east and south, and within the last two years, there has been a very rapid increase of capital and inhabitants to the village, and also a corresponding rise in the value of real estate in the vicinity. Judging from the present appearances of its industrious and prosperous inhabitants, they seem to have caught up the spirit of the place, and, like their own Water Power amongst the Water Powers of the World, they acknowledge no superiour, in either water or steam.

Remaining, dear sir,
Yours with esteem,
JOHN CLOWES, C. E.

New York, September, 1845.

RIO JANEIRO AND THE ADJACENT COUNTRY.

Rio de Janeiro, a large and populous city, distinguished for the extreme beauty of its locality and for its being the capital of the Empire of Brazil, is situated almost immediately under the Southern Tropic. A stranger, on entering the Bay of Rio, is struck with its beautiful and picturesque scenery. On one side arise hills of two thousand feet in altitude, whose bases form the western shore, and of which the most remarkable are the Garia and the Corcovado or Parrot's Beak. The opposite shore is level with the Organ Mountains in the distance. The narrowest part of the Bay is where the fort of Santa Cruz is situated, at the foot of a large and mountainous rock, immediately fronted by the one called the Sugar Loaf, which rises immediately from the water's edge, and forms an abrupt precipice of several hundred feet. After sailing through this narrow pass, the city, with its picturesque churches, the harbour, crowded with shipping, and the bay, appearing like a large lake studded with islands, come full into view. But, as is too frequently the case in tropical countries, on landing at the town itself, all pleasurable anticipations are destroyed. Rio is in fact badly built; the site of the town was formerly a marsh, which, after heavy rains, occasion some parts of it to be flooded. Some of the streets are regular and well built, with, however, a great disregard to uniformity, and the population, of all shades and dresses, gives an aspect to the visiter somewhat unfavourable. The first visit the stranger makes will be to the Public Buildings, the Museum, Chamber of Deputies, Senate House, and Botanical Gardens, all of which are well worthy of attention.

The Museum is a large building in the Santa Anna Square and consists of several rooms destined for particular branches of science. The admission is gratuitous, and the attendants appointed by Government are extremely courteous and obliging. The collection of minerals is rich, and consists of specimens of most of the primitive rocks, carefully classed, as well as of a rich selection of diamonds from the district of Tejuco. Don Pedro paid great attention to its interests, and enriched it with a variety of pictures and imported subjects of art and science, besides encouraging, by rewards, the transmission of curiosities. In the same square stands the Senate House, which is a very ordinary looking building. Here the Emperor delivered the speeches from the throne at the opening of the Chambers. The constitution of the House consists of forty-nine members, who are indiscriminately men of title, ecclesiastics and commoners. Their qualification is an annual rental from property or business of 800 miliers, and they must be upwards of forty years of age. They are elected from the Provinces, each Province furnishing half the number of Senators, as Deputies, in triple lists, out of which the Emperor selects one. The galleries of the house are open to all respectable persons, and, as the business is transacted in the day time, are much frequented. It was here the Senators met to determine the Provisional Regency on the abdication of Don Pedro, and the debates on this occasion were conducted with great temper and order. Many of the Senators are extremely clever and intelligent men—the Viscount Caspie, who is a great author and quite conversant with English literature—the Marquis of Barbacena and Marquis of Santa Aman, both well known, as well as the Marquis of Aracati, who was Secretary of State at the time of the abdication.

The Chamber of Deputies is situated near the Palace, in the Rua Directa, and although a very mean looking building externally, is very commodious inside. The chamber is on the ground floor arranged in the form of a semi-circle from the president's chair, reaching to the throne, two or three rows deep. The discussions, open to the public, commence at ten, and generally close between two and three in the afternoon. The number of Deputies is one hundred, who attend in full dress, and conduct business in the most orderly manner. Their qualification is an income of 400 miliers, and each member receives from the State an allowance for his attendance, and also his expenses of coming from, and returning to the Province for which he is elected. Provided the Ministers of State are not members of the House, they are still at liberty to attend and speak on every subject connected with their functions, but have no vote, nor are allowed to be present at a division, and in case a deputy accepts office under the crown, his seat is vacated. The existence of the two Chambers is for four years, and the time of a session is four months; the opening and closing of which is generally graced by a speech from the Executive.

Don Pedro, once, on opening a session, was dressed in a very rich manner, and over the whole was thrown a superb tippet of Toncan feathers, in imitation of the distinguishing mark of rank formerly worn by the ancient caciques of Brazil. He read his speech with much dignity and self-possession; at times, however, he was very laconic, and even *brusque* in his addresses; and once, in 1829, after some very stormy debates, and when much excitement prevailed to hear what would be said from the throne, he dissolved the Chambers with these words: "August and distinguished Senators and Representatives, the session is closed."

Adjoining the Hall of Representatives is the Palace, a large and handsome building, fronting the Bay. The rooms inside are large and spacious, stored with some good pictures, but not well furnished, as it is only used on State occasions. Near the Palace is situated the Market, which is plentifully supplied with fish, poultry, and vegetables. In the Rua Directa stands the Custom House, a large, irregular building, containing stores for every description of goods. Vessels discharge their cargoes at the custom house wharf, and the packages placed in store, to be taken out at the discretion of the owners; they are at liberty to lie free of rent and charge three years. In former times this arrangement led to much peculation and smuggling, the real goods, by connivance with the custom house guards, were sent on shore while the vessel was at anchor in the bay, and other cases, similarly marked, filled with rubbish, regularly landed and placed in deposite; it was only after years the trick was discovered. A better management is now exercised, though still much smuggling is carried on. Adjoining the Custom House is the Exchange, now never used, since a fatal massacre there, recorded in Brazilian history.

Here are also the Exports and Shipping Offices, where the products of the country are put on board lighters for shipment; and where the outward duties are paid. The duty on imports is fifteen per cent. ad valorem, from countries with which Brazil has treaties, and twenty-four per cent. from strangers, and on exports twenty per cent.

The Arsenal is also worth a visit. Their Navy does not excite any particular remark. The Opera House is also well conducted but an unhappy political disturbance having occurred there, in which three or four lives were lost, caused it to be shut up and the company disbanded.

On leaving Rio for the Botanical Gardens, about five miles distant, the views are highly interesting. After passing the Catete Bridge, over a delightful road, the visiter comes to Botu Togo, which is quite the West End for foreign society: it has a fine beach, and enjoys a salubrious temperature. On its margin are built some very large houses, tenanted by the first merchants, and the corps *diplomatique*. At one end is a very well situated mansion, formerly a small palace belonging to the Emperor. Pursuing the road, winding at the base of the Corcovado, the visiter passes a small lake, and arrives at the Botanical Gardens. These are tastefully laid out in long and shady walks of lofty trees, and the walks are kept in clean order. The principal attraction to an European is a large plantation of the tea plant. The number amounts to nearly ten thousand plants, which are under the management of several Chinese, brought over expressly to attend to their cultivation. The shrubs are about three or four feet high, planted in rows, with an interval between each row of about three feet. They flower and produce seed, and arrive at the same maturity as in in their native clime. From some cause, however, the leaves do not produce so finely flavoured a tea as the Chinese plant, but whether this is from the strength of the soil, or from the subsequent preparation, I cannot say. Here, also, the clove, cinnamon, and camphor trees come to great perfection. The English have a well built church in Rio and a burial ground, and in common with other foreigners enjoy the greatest protection and liberty.

I can hardly close this notice of Rio, without adverting to the slave population, which forms so large a portion of its inhabitants; they are prinpically of the Cabinda and Mosambique tribes, and appear to think lightly of their condition. They are generally well treated by their masters, and clothed and fed with care. After the labours of the day are over, it is not uncommon to see them dancing in groups, one playing on some musical instrument of their own construction, apparently enjoying their existence.

The country about Rio de Janeiro opens rich and varied scenes to the spectator, of which a mere description can give but a faint idea. I took advantage of a fine day, to ascend the Corcovado, or Parrot's Beak Mountain, in which arise the sources of the Aqueduct, and from whose summit there is a noble view of the town, bay, and shipping. After passing the Saranjeiras, the road winds up a beautiful and romantic pass, interspersed with a thousand aromatic shrubs, shedding their balmy odours on the air, while myriads of gay butterflies, diamond beetles, and beautiful birds, give animation to the scene. After ascending some considerable distance, I arrived at a spot called the "Mai das Aquas," or Mother of the Waters, where there is a beautiful cascade of gushing water, which flows on to the grand trunk of the Aqueduct, much lower down. This Aqueduct supplies the city with its principal water, and was finished in 1740, and empties itself into a variety of fountains, erected in different parts of the city for public convenience. Toiling further up, the ascent becomes more steep, and the climate and vegetation change. At the top there is a small house, formerly used as a telegraph station, but going to decay, and merely affording a shelter to the traveller. From hence the view is magnificent; stretched at your feet is the large and populous city, and the bay, studded with a number of islands, and crowded with the flags of all nations, while in the distance, are the picturesque Organ Mountains. Indeed, words are inadequate to describe the lofty impressions which the contemplation of such a scene imparts, and nature herself seems to respond to such feeling.

Another delightful ride, is a visit to the waterfalls of Tejuco, a pretty spot, about ten miles distant from the city. I took advantage of an invitation from my friend, Mr. L., who has a coffee plantation there, to visit them. The road lies through Engenho Velho, past the Emperor's palace of San Cristaof, which we alighted to view. This palace, which is very irregularly built, originally belonged to a wealthy Portuguese, who made a present of it to Don John VI. The entrance is through a magnificent portico of Portland stone, the fac simile to the one at Sion House, (Engand,) presented by the Duke of Northumberland. The gardens are handsome and spacious, and the public are freely welcome to walk in them. Pursuing the route, I passed on my left a chalybeate spring, called the Agoas Fencas, or iron impregnated waters; this is much resorted to by valetudinarians for their general tonic qualities. From the top of Tejuco, there is probably no place where Rio and its environs can be seen to greater advantage. I recommend the traveller to make a halt at Boa Vista.

The great attraction at Tejuco, is the water fall, where the deep quiet of the solitude, and the refreshing coolness of the air, would point it out as a fit and enviable place of retirement. Pursuing my route over a mountain ridge, I had a fine view of the sea to the south, and the lake of Jacarepagua. To the beauty of the magnificent prospect, the ocean was a grand limit; I recollect, well, the impression it made on me. Alone, in a foreign land, it still seemed a link to the land of my fathers. I felt less far from home, but still it brought a sad thought of one's own nothingness in contrast with its unchangeableness. I thought that other generations had wandered in these valleys, and stood on those shores, and so it would be when we were gone, the same prospects would gladden other hearts and charm other eyes, but the ocean will still roll on, the mountains forever frown in their sullen grandeur.

Near the top of the valley, and planted on both sides with coffee trees, is the estate of Mr. L. The coffee trees are about 70,000 in number, and the soil seems admirably adapted for their culture. Few of the trees exceed ten feet in height, and they generally begin to bear fruit about two years after they are planted, which is generally done in rows on the slope of the hill, giving sufficient space for them to extend in width. The first gathering takes place about March, there being two or three in the year, according to the season. This tree presents the singularity of the ripe red berry, the green berry, and the flower, (a delicate white of an aromatic odour,) being on the tree at the same time. After the ripe red berries are gathered, (each berry contains two beans,) the pulp is mashed off in a mill, and the beans left to dry in the sun, on places built expressly for this process, which generally requires a month. When the beans are dry, they are then beaten, to disenvelope them from the husk which still adheres to them. After this operation, they are winnowed, the refuse picked out by negroes, and are then sent to market, packed in bags of five arobas weight. It is considered that a dry soil, on hill-sides, is most favourable for the cultivation of the coffee plant. The force of the coffee crop comes on about June. My friend L. employs a considerable number of blacks upon the estate, and although for months he is frequently the sole resident, yet he has never had occasion to blame his confidence. Many of his slaves are married, and appear to live very comfortably: the Sundays they have wholly to themselves, without any restraint on their amusements.

Santa Cruz is distant about 45 miles from Rio, and where the Emperor has a palace and large estate. The road lies through San Cristaof and Venda Grande, and is richly skirted on both sides with hedges of orange trees, interspersed with luxias and cactus. As this road was frequently travelled by Don Pedro, greater attention was paid to its conservation than to any other in Brazil, and in imitation of the post roads in continental Europe, league stones, instead of mile stones, were laid down. The traveller sleeps the first night at Campo Grande, a wretched venda, where we had the greatest difficulty to get any thing cooked, and where our sleeping accommodations were of the most miserable description. In the evening of the next day we arrived at Santa Cruz, over a tract of ground covered with the sensitive plant. As a village, Santa Cruz quite disappointed us, being a dirty spot, crowded with slave huts, the only building of importance, the palace, and even that, insignificant in appearance. This building, formerly a Jesuits' college, is, however, admirably situated; the prospect from it is remarkably fine; on one side the eye wanders over a large and fruitful plain, bounded by the sea, and on the other by wild and romantic mountains. Beneath rolls a quiet little river abounding with fish, whilst the plain yields abundance of oranges. Attached to the palace are large and spacious gardens, in which a variety of plants and fruits are brought to great perfection. I particularly admired the Tanjerina orange, which is, perhaps, the most delicious fruit of its class; the colour of the pulp is blood red, the rind quite thin, and flavour most exquisite. These qualities are produced by grafting the orange on a pomegranate tree, a method introduced by the Chinese; the plan they adopt is as follows: the orange branch after being inserted into the other tree, is luted with clay, which is kept moistened until the roots spring through; the branch is then separated from the tree and put into the ground, imbibing in its future growth and production all the advantages of the union. This is a practice very much adopted with regard to the orange trees in Bahia, where that fruit is justly celebrated for its richness and flavour. Don Pedro has 3,500 slaves employed in cultivating this immense estate, and for their accommodation keeps a venda in the village, certainly the two extremes of profession—monarch and huckster. I would recommend every tourist to see the view from the Pedrecras, a rocky eminence about ten minutes walk from the venda, and on returning order some taherihas' broiled; they are as delicious as trout, and very abundant in the Tagoyahy River, mentioned before.

Having made these preliminary trips, I availed myself of the Easter Holidays to visit the Swiss Colony, founded by Don John VI. There are two roads to the Colony, one by the Port Estrella, crossing the Organ Mountains, and the other by way of Praia Grande, passing through several villages. I preferred the latter, though a longer route, from the greater opportunity it would afford me of seeing the country. I embarked with my mule in one of the boats plying between the city and Praia Grande, and passing the village of San Joao Gonzales; arrived in good time at the small villa of Alcantara. The accommodations, as usual, wretched; after much solicitation they cooked me a fowl, but which was almost loathsome from the mass of garlic with which it was stewed; this, with black beans and rice, formed the sumptuous supper, except a closing dish of caujica, which was not unpalatable. This dish is the green Indian corn, stripped of its husk, and boiled till it becomes glutinous, and then eaten with sugar. Our sleeping apartment was execrable; my friend, self, and guide, all passed the night in a small room without a window to admit a breath of air, and only a mat on which to repose. Next day after our coffee and cigar, we pursued our journey; it was a truly lovely morning, and the early breeze imparted a refreshing coolness to the frame; on every side the aromatic perfumes of the mimosas, the passion flower, and orange groves, stole on our senses; we saw the tiny humming-bird kissing the morning dew away from the purple rhexia, and the gay, golden blossoms of the double leaved jacaranda; hundreds of little doves were flitting over our path, and the lizards, in their prodigality of rich and variegated colours, were darting from mound to mound, all presenting a picture of animated nature, and careless existence, in unison with our own joyous feelings! our own buoyant happiness. Happy moments! where we live for the present, when the sunshine alone gladdens us, when we fondly anticipate a long, long day of cloudless happiness, and, if perchance we think of the probable storms of the future, the thought presses but lightly and passes fleetly. At noon we passed through a tolerably sized town, called St. John; but from any thing we could judge, it might have been the city of the dead: we did not see a dozen people in the streets; all were within doors enjoying their siesta. We stopped the night at Serra-booh, and fell in with quite a patriarchal host, who lodged and entertained us in the most hospitable manner, refusing to take any thing in repayment. Next morning we rode through two most extensive sugar estates, one of them belonging to the Felisberto family, (Marquis of Barbacena.) The sugar on these estates is remarkably good, and the process of boiling, clarifying, and evaporating, is performed the same as in the West Indies. The clarifying is sometimes effected by quick lime, which has the effect of neutralizing the excess of acid frequently found mixed with the saccharine matter of the cane. The cane is planted by cuttings, during the rainy seasons, humidity being quite essential to its fertility; when of full growth it is of the height of six to eight feet, jointed in the stem and the leaves, of a beautiful green, bladed and serrated. During the season of gathering and crushing, there is much festivity in the plantations, and the slaves get fat on its cloying sweetness. In the afternoon we passed over the bridge Periheiro through a deserted village; here a violent pestilence had been raging for some time, similar in diagnosis to the yellow fever of the West Indies; the inhabitants had all fled, and silence and desolation gave a most melancholy aspect to the streets. The ground around was marshy, and seemed well fitted to be the cradle of malaria; we took care to be expeditious in our transit through this place, and cigar in cheek, attempted to ward off the foul miasmatic fiend. After crossing two pretty deep and large rivers, we arrived at the close of the day at the foot of the serra, and took up our quarters in the venda, in company with a numerous body of troperios, just arrived from Canto Gallo, with potatoes and toncinho, on their way towards Rio. Travellers do not stand on many formal ceremonies; we soon made friends, and contrived to pass the evening pretty well. In the morning we ascended the serra, which is a continuation of the Organ Mountains, and although not very steep, the ascent was a long and tedious operation; the loose stones continually impeded the way of the mules, and the path so excessively intricate, that we were at times obliged to trust ourselves entirely to their sagacity. The way led through a forest, in some parts almost impervious, but which afforded a complete protection from the sun. In addition to vast tracts of the tarquara cane, were large quantities of the palm tree, from which is extracted both oil and wine, and it also affords an edible portion, which is both succulent and nutritious, and not dissimilar in taste to the asparagus. Equally remarkable was the sight of a variety of birds, of gay and variegated plumage; the toncan, with its bright yellow feathers, the ben-to-vi, the beija-flor, and flocks of parrots, rending the air with their harsh, discordant notes.

After passing the first registo, the road became almost impassable; in several places the mud was up to the stirrups, and in one spot we found a dead mule, which had fallen into a quagmire and been left to perish from the impossibility of extricating her; we, therefore, turned into a by-road cut through the forest, and with great difficulty pushed our mules through the tangled brushwood and decayed trees, they starting from the serpents and snakes, of which these animals have a great dread.

My attention was also directed to the variety of gums with which the trees were covered, many of them the colour of ruby and amber—particularly the gum tragacanth is met here in great abundance. Dr. Spix, with respect to these gums, supposes, that amber is the gum of trees rounded and petrified by the action of the sea; this may account for our so frequently finding ants and flies imbedded in this substance. The greater quantity of gum is found deposited at the roots of trees, and this process may have occurred, (by the generally uprooting at that period,) as we may naturally suppose trees had the same properties then as now. Previous to arriving at the summit of the serra, we encountered a violent thunder storm, and if we could have had it unaccompanied by rain, I should much have enjoyed the thing—every peal being echoed and re-echoed by the surrounding mountains, and, after apparently dying away in the valley beneath, starting into fresh existence from the mountains beyond. Wet and wearied with our journey, we arrived, late in the evening, at the Swiss Colony.

This Colony, situated in a romantic valley, surrounded on all sides by woody mountains, enjoying a clear sky and delightful climate, might remind the settler of his native Switzerland; it was founded by Don John VI., with a view to promote agriculture and the breed of cattle. These settlers were invited over, with offers of free passage, gifts of a certain quantity of land and stock, but with the condition of cultivation and residence.

Under these offers many individuals with their families came over, and on their landing at Rio, were sent up to this spot, called Morro Juciniado, and formed into a colony. Small and neat houses were built, and lots of ground apportioned them. Discontents, however, soon arose, from the non-fulfilment of the agreement entered into by the Government, and the removal of Don John to Lisbon, left the political parties struggling for various objects no time to fulfil them. Its present condition is not, therefore, in accordance with the hopes once formed of it; many of the Swiss have removed, several of the houses gone to decay, and the few settlers who remain are compelled to do so more from necessity than from the prospect of future benefit.

The aspect of the country towards Canto Gallo is very similar to that

I met with afterwards in the mining districts, and the formation of the rocks gave promise of gold, although the incumbent alluvial earth did not. Hitherto no operations have been entered into, the natives, until lately, having been unacquainted with any other method of procuring the precious metal than by washing.

The Santa Rita mines, visited by Maure, are in this neighbourhood, which corroborate the idea that gold might be procured.

After staying a few days at the Colony, I returned by the Serra Conto, a road paved the whole length, and arrived in two days journey at Rio, without any particular incident to notice.

PATERSON, NEW JERSEY.

Paterson, New Jersey, is one of the creations of the genius of Alexander Hamilton, the true father of the system of domestic industry. In the early part of the year 1791, on the recommendation, and by the influential exertions of this distinguished patriot and statesman, a number of spirited citizens of New York and Pennsylvania associated themselves, for establishing useful manufactures by the subscription of $200,000. The number of shares originally subscribed was 5,000, at $100 per share; but 2,267 shares, only, were fully paid up. A great emporium of manufactures was the general object of the company; their immediate object was the manufacture of cotton cloths. At this period the improvements of Arkwright in cotton machinery, though perfected, were not much used, even in England, and were absolutely unknown in all other countries. In America no cotton had been spun by machinery except in Pawtucket, Rhode Island. The act of incorporation of the Paterson company is said to have been drawn, or revised, by Hamilton. The company was organized at New Brunswick, on the last Monday of November, 1791, by the choice of the first board of directors, composed of Messrs. Duer, Dewhurst, Walker, Low, Flint, Boudinot, Bayard, Neilson, Mercer, Lowring, Lewis, Furman, and McComb. William Duer was chosen the first Governor of the Company.

Hamilton, who was not a stockholder, and whose disinterested exertion in its behalf were prompted by higher motives than pecuniary profit, had previously to the act of incorporation, at the request of the company, engaged English and Scotch artisans, and manufacturers of cotton machinery and cotton goods, to establish their bsuiness at Paterson.

In May, 1792, the company selected, with admirable judgement, the Passaic as the principal site of their operations; giving to their town the name of Paterson, after the Governor who had signed their charter. At this period, there were not more than ten houses in the town.

At a meeting of the directors at the Godwin Hotel, on the 4th July, 1792, appropriations were made for building factories, machine shops, and shops for calico printing and weaving; and a race-way was directed to be made for bringing the water from above the falls to the projected mills. Unfortunately, the direction was given to Major L'Enfant, a French engineer, whose projects commonly failed from the waste of means provided for their attainment. He commenced the race-way and canal, designing to unite the upper Passaic with the lower, at the head of tide, near the present village of Acquackanonck, by a plan better adapted to the resources of a great empire than to those of a private company. In January, 1793, Peter Colt, of Hartford, then Comptroller of the State of Connecticut, was appointed General Superintendent of the affairs of the company, with full powers to manage its concerns, as if they were his own individual property. Mr. Colt completed the race-way, conducting the water to the first factory erected by the company. The canal to the tide water had been abandoned before the departure of the engineer. The factory, ninety feet long by forty feet wide, and four stories high, was finished in 1794, when cotton yarn was spun in the mill; but yarn had been spun the previous year by machinery moved by oxen. In 1794 calico shawls and other cotton goods were printed; the bleached and unbleached muslins being purchased in New York. In the same year the society gave their attention to the cultivation of the silk worm, and directed the Superintendent to plant mulberry trees for this purpose. In April of this year a teacher was employed to instruct gratuitously, on the Sabbath, the children employed in the factory. This was probably the first Sunday school established in New Jersey. Notwithstanding their untoward commencement, and the many discouragements attending their progress, the directors persevered in their enterprise, and during the years 1795, 1796, much yarn of various sizes was spun, and several species of cotton fabrics were made. But at length, satisfied that it was hopeless to contend successfully longer with an adverse current, they resolved, July 1796, to abandon the manufacture and discharged their workmen. This result was produced by a combination of causes. Nearly $50,000 had been lost by the failure of the parties to certain bills of exchange purchased by the company, to buy in England plain cloths for printing; large sums had been wasted by the engineer; and the machinists and manufacturers imported were presumptuous, and ignorant of many branches of the business they engaged to conduct; and more than all, a want of experience relative to the subject of the enterprise, and the country unprepared for manufactures. The cotton mill of the company was subsequently leased to individuals, who continued to spin candle wick and coarse yarn till 1807, when it was accidentally burnt, and never rebuilt. The admirable water power was not, however, wholly unemployed. In 1801, a mill seat was leased to Messrs. Kinsey & Co.; in 1807, a second, and in 1811, a third, to other persons; and between 1812 and 1814, several others were sold or leased. In 1814, Mr. Colt purchased, at a depreciated price, a large proportion of the shares, and reanimated the association. From this date the growth of Paterson has been steady, except during the three or four years that followed the peace of 1815. The advantages derivable from the great fall in the river, have been improved with much judgement. A dam of four and a half feet high, strongly framed and belted to the rock in the bed of the river above the falls turns the stream through a canal excavated in the trap-rock of the bank, into a basin, whence, through strong guard-gates, it supplies in succession three canals, on separate planes, each below the other, giving to the mills on each, a head and fall of about 22 feet. By means of the guard-gate the volume of water is regulated at pleasure, and a uniform height preserved, avoiding the inconvenience of back-water; $40,000 have been expended to effect this privilege.

In July, 1827, there were in Paterson, by a census then taken, fifteen cotton factories, 24,000 spindles, consuming 600 bales of cotton, or 1,630,000 lbs. Two factories of canvass, 1,644 spindles, extensive machine shops, and iron works. Flax mills consuming 620,000 lbs. of flax annually; 430,000 lbs. of flaxen yarn; 630,000 yards of cotton and linen duck made annually; 3,354,000 yards of cotton cloth annually made. Yarn sent away, or exported, 796,000 yards. Several new factories commenced.

To show the progress that is making in this busy, bustling village, we refer to the following statistics, just now taken, the correctness of which may be thoroughly relied upon:

STATISTICS OF THE VARIOUS MANUFACTURING ESTABLISHMENTS IN PATERSON, MAY 1ST, 1845.

Number of cotton factories in operation,	23
Number of machine shops with foundries and blacksmiths' shops attached,	6
Number of, locomotive shop,	1
Do. Woollen mills in operation,	3
Do. Paper do. do.	2
Do. Flax do. do.	2
Do. Bleaching, finishing, dyeing and printing works,	3
Total number,	40

Quantity of cotton annually consumed, lbs.	4,500,000
Or number of bales,	10,000
Quantity of flax and hemp, lbs.	900,000
Quantity of wool, which is manufactured into lapping and roller cloths, printers' blankets, satinets, carpetings, &c., lbs.	600,000
Quantity of raw silk, which is made into handkerchiefs, cravats, sewings, saddlers', and floss silks, &c., lbs.	12,000

No. of cotton spindles in operation,	50,000
Do. Flax do. do.	1,350
Do. Wool do. do.	1,236
Do. Silk do. do.	2,380
Total number spindles,	54,966

No. of looms in operation for weaving cotton goods,	700
Do. Flax do. do.	86
Do. Woollen do. do.	75
Do. Silk do. do.	16
Total number of looms,	877

Bleaching, printing, and finishing works, finish annually, pieces,	178,000

Quantity of pig iron, iron used in the different foundries, tons,	3,825
Quantity of bar and boiler iron in the different machine and blacksmith and locomotive shops, tons,	1,360
Quantity of steel, copper, tin, lead, &c., tons,	150
Total amount used, tons,	5,335

Number of lathes for turning iron in operation,	275
Quantity of rags used in paper mills, tons,	1,600
Number of engines in paper mills,	12
Do. machines in do.	4
Number of bobbins made in the several shops annually,	800,000
Number of wood-turner's lathes in operation,	54
Quantity of coal consumed in machine and blacksmith shops, foundries, factories, &c., of anthracite, upwards of, tons,	5,000
Of bituminous, chaldrons,	4,000
Of charcoal, bushels,	50,000
Quantity of oil consumed in above, total amount, gallons,	20,600
Number of hands employed—	
In cotton factories,	1,898
In flax mills,	128
In woollen mills,	90
In silk factory,	75
In bleaching, printing, &c. works,	98
In paper mills,	120
In machine and blacksmith shops, foundries, &c.,	1,278
In bobbin factories,	60
Total number of hands,	3,747

Total amount of wages paid in the different cotton, woollen, flax, paper, and silk mills, machine, locomotive, blacksmith shops, foundries, &c., &c.,	$700,000

The annual amount of flour consumed in the town, exclusive of the grain brought in by the neighbouring farmers, is..barrels,	15,598

CENSUS OF PATERSON, MAY 1ST, 1845.

Number of families,	2,000
Number of males over 16,	3,022
Do. do. under 16,	2,327
Do. Females over 16,	3,178
Do. do. under 16,	2,301
Do. Coloured,	258
Total amount of population,	11,086
Do. do. do. in 1838,	9,048
Increase,	2,038
Number of births within the preceding 12 months,	425
Do. Deaths, do. do.	214
Excess of births,	211
Number of dwelling houses occupied,	1,208
Number of dwelling houses in progress of erection,	148
Number of churches, viz: First Presbyterian, Second Presbyterian, Episcopalian, Dutch Reformed, True Dutch Reformed, Baptist, Methodist Episcopal, Free Church, Primitive Methodist, Roman Catholic, Congregational Methodist.	12
Number of clergymen,	13
Number of teachers in the different schools,	30
Do. Scholars, do. do.	1,213

There is also an infant school, under the direction and patronage of the ladies, in which are gratuitously taught, on an average, annually, 175 scholars.

There are in the Town—

Court House and Jail.
County Clerk's Office.
Surrogate's Office.
11 Lawyers.
10 Judges.
17 Justices of the Peace.
Post Office—Wm. D. Quin, Postmaster.
People's Bank—Capital $75,000—President, E. B. D. Ogden; Cashier, H. C. Stimson.
A Circulating Library containing 480 vols.
An Incorporated do. do. 470 vols.
An auction and commission store, R. Chiswell.
2 Societies of Odd Fellows.
An Order of Rechabites.
2 Book stores.
2 Printing offices—employing 6 hands.
4 Insurance agencies.
6 Fire engines, and a hook and ladder company.
A public dispensary, (incorporated.)

11	Physicians.			
2	Dentists.			
2	Surveyors and civil Engineers.			
1	Bookbindery.			
2	Exchange offices.			
8	Patent platform scales.			
1	Cord and tassel manufactory,	employing	22	hands.
5	Table cloth do.	do.	34	do.
1	Do. Printer,	do.	3	do.
1	Wood type and printers' furniture establishment,	do.	12	do.
2	Reed makers.			
2	Tanners and curriers with 62 vats,	do.	20	do.
11	Coal and lumber yards,	do.	54	do.
2	lime kilns,	do.	6	do.
3	stone and marble yards,	do.	28	do.
3	Quarries, (free stone.)			
1	Size house,	do.	5	do.
4	Dyeing establishments,	do.	12	do.
3	Cooperages,	do.	8	do.
2	Breweries,	do.	7	do.
1	Chandlery.			
38	Boarding houses.			
10	Taverns.			
13	Oyster and eating houses.			
6	Bakeries,	do.	17	do.
7	Butcheries,	do.	23	do.
5	Tobacconists,	do.	30	do.
2	Umbrella makers,	do.	5	do.
5	Watch makers.			
6	Wheelwrights,	do.	19	do.
5	Saddle and harness maker's shops,	do.	22	do.
6	Livery stables.			
12	Tailor shops,	do.	60	do.
7	Tin shops,	do.	58	do.
29	Boot and shoe stores and shops,	do.	131	do.
7	Cabinet maker shops,	do.	27	do.
1	Silver and brass plater,	do.	3	do.
2	Locksmiths,	do.	9	do.
15	Milliner shops,	do.	38	do.
67	Mantua makers.			
59	Grocery stores.			
11	Fancy do.			
7	Clothing do.			
15	Dry goods do.			
6	Hardware do.			
4	Crockery do.			
5	Drug do.			
5	Hat and cap stores.			
46	Painters.			
52	Clerks.			
38	Teamsters.			
38	Millwrights.			
78	Weavers, (hand and boss.)			
51	Carders, (cotton and wool.)			
23	Carpet Weavers.			
40	Spinners.			
37	Cotton manufacturers.			

3 Wool manufactures.
392 Machinists.
79 Blacksmiths.
218 Carpenters.
350 Labourers.
48 Stone cutters.

We refer with much satisfaction to this detailed account of the industrious portion of our fellow-citizens, in an adjoining State, showing, as it does most completely, how the physical and moral condition of the population of the beautiful village under notice, has increased since 1838, amounting, as such increase does, to two thousand and thirty-eight, or nearly one-fifth of its then population. Who can contemplate a scene like this, and deny the advantages resulting from the use of this large and valuable water power, without feeling a patriotic pride at its result. Nor is the pecuniary advantage derived to the country, by any means the most important part of the exhibit here made. The religious and moral instruction of the population, offers to the philanthropist and the real friends of the rising generation, a far higher theme for congratulation. Here are thirteen churches of as many different denominations of Christians, under the care of as many clergymen, proving the value of the spirit of toleration which is permitted under our free institutions; where every person is allowed to worship his maker according to the dictates of his own conscience; and besides thirty teachers in the different schools, in which there are twelve hundred and thirteen scholars, there is, also, an infant school, under the direction and patronage of the ladies, in which one hundred and seventy-five infants receive gratuitous instruction.

While our manufacturing establishments are thus conducted, with so much regard to the moral and religious instruction of those concerned in them, who shall doubt the great benefit conferred upon the country, by thus profiting of the natural advantages of such situations as that of which we now give the record.

In this, as in all other similar establishments, more than one-half are females, who are increasing the general accumulation by the lucrative employment of those of that sex who would, otherwise, add but little to the national wealth.

ILLINOIS—CHICAGO,

ITS RISE, PROGRESS, AND PROSPECTS.

The great region of the Far West has occupied the attention of the public mind during a few years past, and there is not perhaps, another section of this extensive country, the rapid developments of whose resources have been viewed with more glowing interest than the prairie State of Illinois. Possessing an incomparably fertile soil, richer indeed than that of any other State in the Union, added to unusual facilities for bringing it into successful cultivation; its *variety* of valuable productions; its commanding geographical position, so very favourable to commercial intercourse, Illinois possesses strong claims, among its western sisters, as regards its fitness for the purposes of agriculture, manufactures, or commerce.

Like many of the other Western States, Illinois has been depressed and crippled. Her heavy liabilities have caused many to dread the resort *to taxation*. These, together with the unfinished state of her public works have been obstacles to immigration, and have laid stumbling-blocks in the way of her advancement to that high position which she is destined, ere long, to occupy. But, "a change has lately came o'er the spirit of her dream." That dark cloud which has lowered over her prospects has vanished, and the bright sun of prosperity now dawns upon her.

The means of liquidating the principal part of the State debt, without resorting to an oppressive taxation, and for the completion of the Illinois and Michigan Canal, have been provided for by the foreign bond-holders and creditors of the State. Thus circumstanced, with her natural and artificial resources, Illinois will soon be looked upon as one of the most flourishing parts of our country. The emigrant seeking a home in the western region, can here secure valuable lands at the government price. These are easily tilled, requiring very little labour to produce the staple products, and with enterprise and industry he can soon make his situation one of ease and independence.

Among the cities and towns of the western country, whose magic rise, progress, and rapid development during the brief space of a few years, have excited the astonishment, not only of our own countrymen, but enlisted great interest abroad, the city of Chicago, the principal commercial town in Illinois, may be proudly pointed to, as challenging the history of our whole country for a parallel, considering the short time since it emerged from the chrysalis condition of a trading post, and became the city it now is ; possessing a population of over twelve thousand, and commanding a large portion of the trade and commerce of the great lakes.

Chicago is situated on the southwestern border of Lake Michigan, in Cook county, and is the eastern terminus of the Illinois and Michigan Canal. Its site is level, yet with sufficient elevation to secure it against the dangers of inundation from the waters of the lake, its harbour is good, and the country in every direction around it, considered the finest in the West. Rolling prairies of the most fertile description, commence within a few miles of the city.

The Illinois and Michigan Canal is about ninety miles in length, and will connect the waters of the Illinois River, at Peru, with Lake Michigan. The importance of this work to Illinois is immense. When completed, it will open a communication with the north, and southwestern parts of the State, and be the means of bringing to market the productions of its different parts.

At the last session of the Legislature, a bill was passed providing for the payment of interest on State indebtedness, which had been recommended and approved by the creditors of the State. Active operations have already been resumed on the line of the canal, and we now look forward to the completion of this important work within three years.

Chicago is one of the oldest settlements in the Far West, and was, for a long time, the site of an Indian village. It was visited by the French in 1673, and was occupied by them, at one time, as a military and trading post. The spot where Chicago now stands, originally belonged to the tribe of Pottawottamy Indians. The United States extinguished the Indian claim by purchase in 1795. In 1804 they established a military post called Fort Chicago, and about the same time the American Fur Company, a trading station. On the 15th of August, 1812, the massacre of the troops occurred, and the fort was burned down by the Indians. This massacre was among the earliest occurrences of the war of 1812 In 1817, the fort was rebuilt, and its name changed to Fort Dearborn. In 1823, a survey of a route for a canal, to connect Lake Michigan with the Illinois River, was ordered by the State Government. This having been accomplished, was the first move towards the construction of the Illinois and Michigan Canal. During this year Chicago numbered but three families, and these resided in log-cabins. In 1830, there were five or six log-houses and the population was less than a hundred. During this year, a sale of canal lots in Chicago took place, the lots (which now are among the most valuable in the city) bringing fifty and one hundred dollars. It was at this time that the Black Hawk War broke out, and though it occasioned some alarm at Chicago, was productive of no very serious injury. The first appropriation for the harbour was made by Congress at the session of 1833–4. In 1833, population began to pour in, and the fever of speculation was manifested in the advance of the prices of lots. In 1834, the first newspaper—"The Chicago Democrat"—was started; a few brick buildings were erected, and the school section sold, bringing $39,000. In 1835, the concourse of strangers was very great, and the price of lots very high. In 1836, on the fourth of July, the first ground was broken on the Illinois and Michigan Canal, a branch of the State Bank was located, and speculation was at its height. In 1837, Chicago became an incorporated city. In the spring of 1837, Fort Dearborn was abandoned. It was, during this year, that the injurious effects of speculation began to be experienced in the West. The value of real estate fell about as rapidly as it had risen; individuals, who, but a short time before, were worth hundreds of thousands of dollars, became beggared; failures succeeded failures, and though no town in the western country was more deeply involved in the general calamity than Chicago, yet we behold her, amid all this ruin, rising from the great depression, and pursuing an *onward* course. Improvements continued to be made; travel increased greatly with each succeeding year; trade rapidly improved in quality and amount, and a stability was given to the general business of the place.

Chicago is now one of the most flourishing cities in the Union. Strangers who visit there, are astonished at the amount of business transacted, and view, with great interest, the resources of the place, and the enterprise and industry which characterize its people. Chicago generally presents a highly interesting and animated spectacle during the fall and a portion of the winter. Wheat, the great staple of Northern Illinois, is brought into the city in wagons, not unfrequently from a distance of two hundred and fifty miles. Long trains, reminding one of the caravans of the East, are seen crossing the prairies and approaching the city, heralded by clouds of dust, in all directions. The business streets are rendered almost impassable, by the number of wheat wagons and the fine strings of oxen attached to them. Those employed in the warehouses are constantly and actively engaged in the reception of this grain; runners are eagerly and noisily competing with each other in the purchase of it; you run against a load of wheat or a wheat buyer at every turn.

During a portion of the winter, the pork trade is carried on under almost equally brisk and lively circumstances.

There are fourteen religious societies and associations, and seven

Churches. There is also, a Medical College, a Young Men's Association, a Mechanic's Institute, a Lodge of Odd Fellows, and an Independent Order of Rechabites. The military and fire departments are well organized, and there are various charitable associations.

There is a Hydraulic Company, which supplies the city with water drawn from Lake Michigan.

There are two daily, five weekly, one semi-monthly, and two monthly newspapers published in Chicago.

The number of buildings in July, 1843, was 1,364. Nearly a hundred of these were built of brick. The number of buildings erected in 1844, was 871, and during the present year, a very large number of handsome dwellings and stores have been put up.

The following shows the population of Chicago, according to the census taken in 1844:

	1st Ward.	2d Ward.	3d Ward.	4th Ward.	5th Ward.	6th Ward.	
Males, 10 and under,	326	355	76	86	133	342	1,318
Over 10 and under 21,	196	177	58	48	84	190	753
Over 21 and under 45,	836	819	173	136	207	588	3,446
Over 45 and under 60,	35	52	9	11	12	59	178
Over 60 and under 90,	6	9	4	3	1	13	36
Total,							5,731
Females, 10 and under,	289	373	115	86	131	373	1,358
Over 10 and under 21,	278	244	126	39	50	222	959
Over 21 and under 45,	531	512	128	97	141	451	1,860
Over 45 and under 60,	37	37	8	8	15	53	158
Over 60 and under 90,	7	8	2	3	3	20	43
Total,							4,378
Coloured males under 21,	7	19	2	4	2	5	39
" " over 21	13	17	5	3	1	7	46
Coloured females under 21,	5	9	4	4	3	5	30
" " over 21,	6	13	3	5	4	9	40
Total,							143
Transitory persons,	193	152	57	35	29	118	584
Grand total,							10,864

Number of Irish,	972	Number of Germans,	1,056
" of Norwegians,	531	Natives of other countries,	683
Total,			3,242

of foreign birth, which number does not include the children of foreign parentage, born here.

Chicago now numbers nearly thirteen thousand inhabitants.

We present below the annual amount of exports and imports during the years of 1836 to 1844, inclusive, and we quote the following from a statistical account of Chicago, published this year:

"The opinion which, at first view, may be formed of the commercial prosperity of Chicago, from the great disparity of imports and exports, is by no means flattering; and were there no other means of liquidating the balance, (of trade,) than by the exported products of the country, the prospect would be discouraging in the extreme; but happily, such is not the case.

"The emigrants who have settled amongst us for the last two years, have brought large sums of money, which have been expended in substantial improvements, adding greatly to the wealth of both town and country. The disbursements have done much to equalize the apparent balance of trade, enabling our merchants to purchase large amounts of exchange.

" No inconsiderable amount of merchandise has been sent to the lumbering districts, of which we have no account in our export list, and notwithstanding the present depressed state of trade, when we take into consideration the value of the goods and lumber on hand, and the amount of produce in store, we have good reason for the confident belief that the business interests and prosperity of Chicago are as firmly based as those of any town in the Western States."

Exports.		*Imports.*	
1836,	$1,000 64	1836,	$325,203 90
1837,	11,065 00	1837,	373,667 12
1838,	16,044 75	1838,	579,174 61
1839,	33,843 00	1839,	630,980 26
1840,	228,635 74	1840,	562,106 20
1841,	348,362 24	1841,	564,347 88
1842,	659,305.20	1842,	664,347 88

Articles Exported during the year 1842 :

Wheat,	bushels,	586,907	Flour,	bbls.,	2,920
Corn,	"	35,358	Beef,	bbls.,	762
Oats,	"	53,486	Pork and hams,	bbls.,	15,447
Peas,	"	484	Fish,	bbls.,	915
Barley,	"	1,090	Lard,	lbs.,	367,200
Flax seed,	"	750	Tallow,	lbs.,	151,300
Hides, number of,		6,947	Soap,	lbs.,	2,400
Brooms, "		5,587	Candles,	lbs.,	500
Maple sugar,	lbs.,	4,500	Tobacco,	lbs.,	3,000
Lead,	lbs.,	59,990	Butter,	lbs.,	24,200
Feathers,	lbs.,	2,409	Wool,	lbs.,	1,500
Furs and peltries,	packs,	446			

Articles Exported during the year 1843 :

Wheat,	bushels,	628,967	Tobacco,	lbs.,	74,900
Corn,	"	2,443	Leads,	lbs.,	360,000
Oats,	"	3,767	Wool.	lbs.,	22,050
Flax seed,	"	1,920	Candles,	lbs.,	49,000
Pork,	bbls.,	11,112	Soap,	lbs.,	5,300
Lard,	bbls.,	2,823	Furs,	packages,	398
Beef,	bbls.,	10,380	Brooms,	dozen,	180
Tallow,	bbls.,	1,133	Flour,	bbls.,	10,786
Hides, number of,		14,536			

Articles Imported during the year 1843 :

Merchandise,	tons,	2,012	Shingles,		4,117,025
"	packages,	101,470	Square timber,	feet,	16,600
Salt,	bbls.,	27,038	Staves,		57,000
Whiskey,	bbls.,	2,585	Bark,	cords,	430
Lumber,	feet,	7,545,142			

Articles Exported during the year 1844 :

Wheat,	bushels,	891,894	Potash,	bbls.,	36
Flour,	bbls.,	5,320	Bees wax,	lbs.,	5,410
Beef,	bbls.,	7,889	Neats foot oil,	bbls.,	8
Pork,	bbls.,	7,049	Wool,	lbs.,	96,635
Tallow,	lbs.,	34,899	Tobacco,	lbs.,	526,536
Lard,	bbls.,	1,630	Cranberries,	bbls.,	31
Lard oil,	bbls.,	55	Hides, number of,		11,042
Soap and candles,	lbs.,	74,465	Calf skins, number of,		1,246

Deer skins, number of,	5,194	Horns, casks,	29
Furs, lbs.,	8,000	Grass and linseed, bbls.,	72
Buffalo robes, bales,	51	Hemp seed, bbls.,	16
Sheep pelts, number of,	158		

Total value, $785,504 23.

Articles Imported during the year 1844:

Sawed lumber, feet,	19,160,407	Staves,	137,000
Shingles,	12,285,000	Salt,	27,462
Square timber, feet,	66,478	Coal, tons,	2,008

Total value, $234,400

Total value of imports of merchandise, $1,402,016

Grand total of imports, $1,636,416

OUR TRADE WITH FOREIGN NATIONS.

Our readers will perceive by our article on Commerce, which commences this number, that we have given a statement of our trade with Great Britain proper, with England, Scotland, and Ireland, noting each particular article; and that we then expressed our intention to do the same with our trade with all other countries.

It appears that the same idea has occurred to the editors of that most valuable and useful daily journal, The National Intelligencer. It is, therefore, with the greatest pleasure that we give them credit for the following similar useful tables of our trade with the different nations on the American Continent.

This mode of laying before the public, for their inspection, the precise articles of which our commerce with other nations consists; we thought, was an idea exclusively our own. In this, it appears, we were mistaken. It has happened in this case, as in many others, that the thought of doing a good thing, has occurred to two caterers for the public at the same time. This, however, in nowise lessons its value, and we copy these tables from the useful journal in which we find them, well knowing that it will give its liberal editors pleasure to see these important statistics, placed on record in the National Magazine.

But in so doing, we cannot forbear the remark, that much of the advantage which would result from this mode of showing the peculiar nature of the trade exhibited, is lost, from the extremely negligent manner in which the accounts of our imports are published. A reference to the summary will show that in a commerce amounting to $27,823,897, there is an amount of $4,300,242 under the head of non-enumerated articles. We have *before* adverted to this mode of keeping these accounts, as wholly unsatisfactory, and again notice it here, because it so much thwarts the intention and desire, to have a thorough knowledge of the matter in hand.

COMMERCE OF THE UNITED STATES WITH OTHER AMERICAN NATIONS, FOR THE YEAR ENDING JUNE 30, 1844.

Exports to Texas.

Fish, whale oil, and spermaceti candles,	$2,834
Staves, shingles, and planks,	1,928
Provisions, malt liquor, and spirits,	12,498
Bread stuffs,	10,763
Cotton,	11,200
Tobacco,	3,296
Manufactures of all kinds,	144,102
Sundries and non-enumerated,	9,826
Domestic exports,	$196,447
Foreign exports,	81,101
Total exports,	$277,548

Imports from Texas.

Bullion and specie,	$10,114
Cotton,	644,580
Edible nuts,	1,668
Manufactures of all kinds,	6,266
Sundries and non-enumerated,	15,923
Total imports,	$678,551

Exports to Mexico.

Fish, oil, and spermaceti candles,	$25,511
Staves, shingles, planks, spars, &c.,	10,592
Provisions, malt liquors, and spirts,	72,209
Bread stuffs,	154,978
Horses and mules,	17,210
Cotton,	552,750
Manufactures of all kinds,	442,909
Sundries and non-enumerated,	16,593
Domestic exports,	$1,292,752
Foreign exports,	502,081
Total exports,	$1,794,833

Imports from Mexico.

Bullion and specie,	$1,780,267
Dye woods,	135,595
Straw and chip hats,	4,352
Wool, under 7 cents per pound,	13,910
Sugar,	4,237
Indigo,	2,108
Cigars,	2,225
Manilla and sun hemp, and jute grass,	28,438
Coffee and pimento,	4,117
Sundries,	4,189
Non-enumerated,	407,564
Total imports,	$2,387,002

Exports to Central Republic of America.

Fish, whale oil, and spermaceti candles,	$132
Wood, shingles, planks, masts, &c.,	394
Provisions, malt liquors, and spirits,	1,836
Bread stuffs,	$6,990
Tobacco,	948
Gold and silver coin,	10,000
Manufactures of all kinds,	82,821
Non-enumerated and sundries,	256
Domestic exports,	$103,377
Foreign exports,	46,899
Total exports,	$150,276

Imports from the Central Republic of America.

Bullion and specie,	$14,187
Dye wood,	5,523
Mahogany and rosewood,	3,734
Indigo,	112,222
Cotton,	2,338
Sundries,	736
Non-enumerated,	84,668
Total imports,	$223,408

Exports to New Grenada.

Fish, whale oil, and spermaceti candles,	$6,332
Wood, shingles, planks, masts, &c.,	420
Provisions, malt liquors, and spirits,	1,731
Bread stuffs,	15,983
Naval stores,	1,681
Manufactures of all kinds,	51,390
Sundries and non-enumerated,	1,934
Domestic exports,*	$79,381
Foreign exports,	49,225
Total exports,	$128,606

Imports from New Grenada.

Bullion and specie,	$62,605
Coffee,	10,951
Dye woods,	13,819
Indigo,	13,449
Sundries,	3,275
Non-enumerated,	85,517
Total imports,	$189,616

Exports to Venezuela.

Fish, whale oil, and spermaceti candles,	$8,164
Wood, shingles, staves, &c.	5,012
Skins and furs,	2,118
Horses and mules,	608
Tobacco,	5,240
Tallow candles and soap,	96,622
Provisions, malt liquor, and spirits,	46,999
Bread stuffs,	143,135

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* The annual statement makes this amount $75,621.

Manufactures of all kinds,........	$124,271
Sundries and non-enumerated,...	6,562
Domestic exports,*	$438,731
Foreign exports,...........	88,741
Total exports,..............	$527,472

* Stated as being $442,491 in annual statement.

Imports from Venezuela.

Bullion and specie, ...	$5,058
Coffee, ...	817,058
Dye woods, ...	8,168
Cocoa and chocolate,...........	34,492
Sugar,........................	21,261
Indigo,.......................	245,940
Manufactures,.................	1,816
Sundries,.....................	1,732
Non-enumerated,..............	299,954
Total imports,...........	$1,435,479

Exports to Brazil.

Fish, sperm, and whale oil,.....	$7,747
Spermaceti candles,............	20,373
Staves, shingles, and planks,....	22,398
Masts, spars, and naval stores,...	30,146
Provisions, malt liquor, and spirits,	95,214
Flour and bread stuffs, ...	1,513,807
Wax,.........................	21,968
Manufactures of all kinds,......	666,163
Sundries and non-enumerated, ..	31,602
Domestic exports,........	$2,409,418
Foreign exports,...........	408,834
Total exports,............	$2,818,252

Imports from Brazil.

Bullion and specie, ...	$28,609
Coffee, ...	5,802,901
Wool, under 7 cents per lb., ...	49,955
Cocoa*,......................	58,568
Rosewood and mahogany,.......	5,370
Sugar*,......................	121,487
Sundries,....................	7,626
Non-enumerated,..............	809,290
Total imports,...........	$6,883,806

* These two imports were given together in a former statement, in which, by mistake, "*chocolate*" was printed instead of "*sugar.*"

Exports to the Cisplatine Republic.

Fish, oil, and spermaceti candles,	$2,579
Shingles, planks, and lumber,...	19,070
Masts, spars, and naval stores,...	977
Provisions, beer, and spirits, ...	32,709
Cotton,......................	1,442
Tobacco, ...	10,280
Bread stuffs,.................	246,307
Manufactures of all kinds,......	$76,719
Non-enumerated and sundries, ..	4,183
Domestic exports, ...	$394,266
Foreign exports,...........	67,910
Total exports,.............	$462,176

Imports from the Cisplatine Republic.

Bullion and specie,.............	$22,088
Salt,.........................	45
Non-enumerated,..............	122,630
Total imports,.............	$144,763

Exports to the Argentine Republic.

Fish, oil, and spermaceti candles,	$3,931
Shingles, plank, and lumber, ...	14,538
Masts, spars, and naval stores,...	583
Provisions, beer, and spirits, ...	55,060
Tobacco, ...	1,088
Sugar,...	12,627
Bread stuffs,.................	40,591
Manufactures of all kinds,......	109,087
Sundries and non-enumerated,...	7,834
Domestic exports,..........	$245,339
Foreign exports,...........	258,950
Total exports,.............	$504,289

Imports from the Argentine Republic.

Furs, undressed on the skin, ...	$44,762
Wool, not exceeding 7 cents per lb.,	467,020
Non-enumerated,..............	845,744
Indigo,......................	56,986
Salt, ...	564
Beef and pork,...............	5,373
Bar iron,....................	450
Sundries,....................	293
Total imports,...........	$1,421,192

Exports to Chili.

Fish, oil, and spermaceti candles,	$6,953
Staves, shingles, planks, &c., ...	7,535
Masts, spars, and naval stores,...	2,122
Provisions, beef, and spirits, ...	63,489
Bread stuffs,.................	28,462
Tobacco,....................	6,411
Wax,........................	9,258
Sugar,......................	22,550
Manufactures of all kinds,......	703,951
Non-enumerated and sundries, ..	5,914
Domestic exports,.........	$856,645
Foreign exports,...........	248,576
Total exports,.............	$105,221

Imports from Chili.

Bullion and specie, ...	$185,817
Copper, pigs bar, and old, ...	355,842

Dye woods,	$3,345
Leghorn, straw, and chip hats,	18,833
Wool, not exceeding 7 cents per lb.,	19,847
Cocoa,	26,431
Hemp,	2,234
Manufactures,	9,470
Sundries and non-enumerated,	127,951
Salt,	600
Total imports,	$750,370

Exports to Peru.

Masts, spars, and naval stores,	$365
Provisions,	1’917
Bread stuffs,	2,570
Manufactures of all kinds,	8,683
Sundries,	518
Domestic exports,	$14,053
Foreign exports,	2,754
Total exports,	$16,807

Imports from Peru.

Bullion and specie,	$21,839
Copper pig, bar, and old,	17,775
Palm-leaf hats and Leghorns,	21,611
Coffee, cocoa, and chocolate,	68,470
Manufactures,	340
Sundries,	54,389
Total imports,	$184,424

Exports to British West Indies.

Fish, oil, and spermaceti candles,	$33,699
Staves, shingles, planks, &c.,	312,342
Masts, spars, and naval stores,	3,916
Provisions, beer, and spirits,	772,408
Horses and mules,	215,902
Sheep,	14,669
Bread stuffs,	2,194,052
Rice,	159,739
Tobacco,	36,885
Gold and silver coin,	6,100
Manufactures of all kinds,	287,782
Non-enumerated,	76,724
Domestic exports,	$4,114,218
Foreign exports,	21,828
Total exports,	$4,136,046

Imports from British West Indies.

Bullion and specie,	$345,294
Coffee, chocolate, and cocoa,	6,459
Copper and brass,	42,430
Dye wood,	19,154
Mahogany and rosewood,	4,049
Wines, spirits, and beer,	4,785
Molasses,	2,917
Sugar,	22,206
Spices,	38,699
Coal,	765
Salt,	99,693
Manufactures of all kinds,	16,497
Sundries and non-enumerated,	$84,958
Total imports,	$687,906

Exports to British American Colonies.

Fish, oil, and spermaceti candles,	$46,257
Shingles, staves, planks, &c.,	92,367
Masts, spars, and naval stores,	20,735
Ashes, pot and pearl,	2,434
Skins and furs,	17,535
Provisions, beer, and spirits,	782,225
Bread stuffs,	2,156,936
Horses and mules,	11,450
Sheep,	8,138
Rice,	38,207
Cotton,	96,843
Tobacco,	19,355
Sugar,	7,775
Domestic salt,	46,498
Manufactures of all kinds,	1,778,503
Sundries and non-enumerated,	235,928
Domestic exports,	$5,361,186
Foreign exports,	306,125
	$5,667,311

Imports from British American Colonies.

Bullion and specie,	$445,995
Copper and brass,	10,817
Dye wood, in sticks,	2,258
Furs, undressed on the skin,	7,977
Mahogany and rosewood,	1,700
Wool, not exceeding 7 cents per lb.,	3,368
Wool, exceeding 7 cents,	3,237
Wine, spirits, and beer,	2,341
Molasses,	2,664
Sugar,	3,143
Indigo,	6,292
Rags,	5,348
Coal,	115,906
Salt,	8,701
Potatoes,	11,937
Fish, dried and pickled,	261,349
Manufactures of all kinds,	46,577
Sundries and non-enumerated,	526,105
	$1,465,715

Exports to Cuba.

Fish, oil, and spemaceti candles,	$471,973
Staves, shingles, planks, &c.,	541,539
Masts, spars, and naval stores,	9,073
Provisions, beer, and spirits,	750,437
Bread stuffs,	219,186
Manufactures of all kinds,	1,357,980
Horses and mules,	7,200
Rice,	313,969
Cotton,	540,183
Tobacco,	23,874
Sundries and non-enumerated,	68,648
Domestic exports,	$4,304,062
Foreign exports,	934,533
Total exports,	$5,238,595

Imports from Cuba.

Bullion and specie,	$170,927
Coffee, chocolate, and cocoa,	1,207,104
Copper, in pigs and bars,	60,509
Dye woods,	19,251
Mahogany and rosewood,	49,561
Wine and spirits,	3,621
Molasses,	2,108,304
Sugar,	4,510,454
Fruit and spices,	3,495
Indigo,	7,417
Cigars,	961,261
Manufactures of all kinds,	14,449
Sundries and non-enumerated,	814,068
Total imports,	$9,930,421

Exports to Hayti.

Fish, oil, and spermaceti candles,	$241,503
Shingles, staves, and planks,	42,214
Masts, spars, and naval stores,	922
Provisions, beer, and spirits,	231,490
Bread stuffs,	$212,015
Rice,	26,540
Tobacco,	10,385
Gold and silver coin,	60,701
Sugar,	1,726
Manufactures of all kinds,	251,786
Sundries and non-enumerated,	3,525
Domestic exports,	$1,082,807
Foreign exports,	45,549
Total exports,	$1,128,356

Imports from Hayti.

Bullion and specie,	$90,468
Coffee, cocoa, and chocolate,	1,086,593
Dye wood, in sticks,	80,836
Mahogany and rosewood,	105,841
Manufactures of all kinds,	1,627
Sundries and non-enumerated,	75,879
Total imports,	$1,441,244

GENERAL SUMMARY OF THE FOREGOING EXPORTS.

	Domestic.	Foreign.	Total.
To Texas,	$196,447	$81,101	$277,548
Mexico,	1,292,752	502,081	1,794,833
Central Republic of America,	103,377	46,899	150,276
New Grenada,	79,381	49,225	128,606
Venezuela,	438,731	88,741	527,472
Brazil,	2,409,418	408,834	2,818,252
Cisplatine Republic,	394,266	67,910	462,176
Argentine Republic,	245,339	258,950	504,289
Chili,	856,645	248,576	1,105,221
Peru,	14,053	2,754	16,807
British West Indies,	4,114,218	21,828	4,136,046
British American Colonies,	5,361,186	306,125	5,667,311
Cuba,	4,304,062	934,533	5,238,595
Hayti,	1,082,807	45,549	1,128,356
	$20,892,682	$3,063,106	$23,955,788

The Domestic Exports consisted of—

Fish, whale, and spermaceti oil, and spermaceti candles,	$877,988
Staves, singles, planks, &c.,	1,070,349
Provisions, malt liquors, and spirits,	2,920,232
Bread stuffs,	6,945,775
Rice,	538,455
Cotton,	1,202,418
Tobacco,	117,762
Manufactures of all kinds,	6,182,679
Masts, spars, and naval stores,	70,520
Skins and furs,	19,653
Wax,	31,226
Sugar,	44.678
Salt,	46,498
Ashes,	2,434
Horses and mules,	252,370
Sheep,	22,801
Specie, (gold and silver,)	$76,801
Sundries and non-enumerated,	470,047
	$20,892,682

GENERAL SUMMARY OF THE FOREGOING IMPORTS.

From Texas,	$678,551
Mexico,	2,387,002
Central Republic of America,	223,408
New Grenada,	189,616
Venezuela,	1,435,479
Brazil,	6,883,806
Cisplatine Republic,	144,763
Argentine Republic,	1,421,192
Chili,	750,370
Peru,	184,424
British West Indies,	687,906

From British Amer. Colonies,	$1,165,715
Cuba,	9,930,421
Hayti,	1,441,424
	$27,823,897

The Imports consisted of—

Bullion and specie,	$3,183,268
Dye woods,	287,949
Mahogany and rosewood,	170,255
Coffee, chocolate, and cocoa,	9,123,144
Indigo,	444,423
Cotton,	646,918
Sugar,	4,682,788
Wool, under 7 cents per lb.,	554,100
Wool, exceeding 7 cents per lb.,	3,237
Palm leaf, chip, and straw hats,	44,796
Copper and brass,	$487,373
Manufactures of all kinds,	97,492
Salt,	109,603
Coal,	116,671
Molasses,	2,113,885
Wine, spirits, and beer,	10,749
Fish, dried and pickled,	261,349
Fruit and spices,	43,862
Cigars,	963,486
Potatoes,	11,937
Furs, undressed and on the skin,	52,739
Hemp, Manilla and sun hemp, and jute grass,	30,672
Sundries,	82,961
Non-enumerated,	4,300,242
	$27,823,897

Many important conclusions may be drawn from these statements, *to* some of which we shall hereafter direct our attention. Another leading consideration is, the great amount of domestic tonnage constantly employed in our intercourse with this American family of nations. A tabular view of the amount of tonnage, and the number of seamen engaged in this trade, which we will give hereafter, will place the entire subject before our readers.

IRON TRADE OF GREAT BRITAIN.

From the London Mining Journal, Aug. 23.

The large and still increasing demand for iron—the stimulus to trade, in general, which such demand excites, and the general prosperity consequent upon the full development of this—the staple produce of our isle, renders every information from practical facts, every statistical data which can be obtained, and even opinions of parties, at all conversant upon the subject, of the utmost importance. Daily do we see statements put forward, that England, as an iron-producing country, cannot keep pace with the demand; but such statements we most unhesitatingly repudiate. It is quite necessary that parties interested in the trade, (and as many of them are readers of publications which give circulation to statements connected with the iron trade, which are not founded in fact,) should be put in possession of every statistical detail connected with that branch of commerce. We now attempt to give a clear view of the present existing circumstances of the iron trade, and venture on an opinion as to future prospects. The quantity of iron required for the projected railways, (bills for which passed in the last session of Parliament,) is generally misstated, and has not yet been correctly calculated. We have noticed a statement, in one of the daily papers, where 400 tons per mile is taken as the average quantity that will be required for the new lines, while it is a well known fact, that a double line of railway, laid down with rails of seventy pounds to the linear yard, and, taking into the account the chains, bolts, pins, screws, and the iron necessary for the sleepers, and that used at the stations, cannot employ less than 700 tons per mile; and taking the number of miles of railroad, sanctioned by the Legislature in Great Britain and Ireland, which are now on the point of commencement, at 2,800 miles, the total quantity of railway iron, required for this country, will be 1,960,000 tons. Taking for granted, (which we safely may,) that the supply of this quantity is spread over a period of at least three years, we have little more than 600,000 tons of iron to produce, annually, in addition to the common channels of consumption; and as the present average make in England, alone, is 6,700 tons per week, nearly 350,000 tons per annum, and which can be doubled by the furnaces now in operation. We cannot join in the general assertion, that the iron manufacturers will not be able to keep pace with the demand. That projected lines of railway, on the continent, will increase the demand for iron in this country, there cannot be a doubt. The iron manufacture in France is yet, in its infancy, and that of Belgium, at present, can render but little assistance, in comparison with the number of gigantic speculations requiring a supply to carry them out. All this, as a mere matter of course, adds to the demand in this country; but, taking *all* into consideration, there will not be the slightest difficulty, on the part of the iron manufacturers of England, to keep up a sufficient stock to meet the growing demand. To those who are not aware of the number or situation of our large iron works, the following statement of the present weekly make of the undermentioned firms will not be uninteresting:

South Wales.	Tons.	*Staffordshire.*	Tons.
Sir John Guest & Co.,	1,200	British Iron Company,	190
Thompson, Forman & Co.,	900	Butterly Company,	150
Blaina Cwm Celyn Co.,	260	Bagnal's,	350
Pentwgn & Co.,	270	*Yorkshire, Lancashire, &c.*	
Crawshay & Co.,	600	Losh, Wilson & Bell,	100
Hill,	300	Cargill & Co.	150
Rhymney Company,	500	Vaughan & Co.	100
Colebrook Dale Co.,	500	Bedlington Iron Company,	130
Bailey, Brothers & Co.,	500	Victoria,	100
Abersychan & Co.,	300	Brought over,	5,430
Cambrian Company,	100		
		Total, ...Tons,	6,700

In addition to which make, in England and Wales, the several iron works in Scotland produce 500 tons weekly.

THE AMERICAN INSTITUTE.

We publish, with heartfelt pleasure, the annexed circular of the American Institute, not with much expectation that we shall aid in procuring additional members to their projected convention. We received the circular too late for our September number, in which it ought to have appeared; but, apart from the present purpose of the circular, there is much embodied in it, which cannot be too widely circulated, nor too deeply pondered, by all who have a proper regard for American feelings and American interests.

On the subject of the culture of the silk worm, and the manufacture of silk, it is important the public should know, that they paid for the year ending the 30th of June, 1844, for raw silk, and the various articles made of silk, imported from foreign countries, no less than $7,258,073, while our exports of wheat, flour, Indian corn, corn meal, rye meal, oats, and other small grain and pulse, amounted to only $8,542,792! Surely, this ought to rouse up our agriculturists to their truest interests.

While we were yet weak colonists, we exported raw silk. "In 1759," says Anderson, in his history of commerce, "we had public advices from Charleston, in South Carolina, of the very hopeful prospect, in that province, of the gradual and considerable progress and increase of the production of raw silk there, and in the adjoining province of Georgia. Indeed, in 1757, one thousand and fifty two pounds weight of raw silk were received at the filature in Georgia, and the next year produced no less than seven thousand and forty pounds weight thereof. This year, 1759, there has been received at Savannah, no less than ten thousand pounds weight of raw silk, although the season has not been favourable. The great augmentation of that rich, new, and valuable production in those provinces, is owing to the increased number of hands in raising the same." We commend also, to our readers, in the strongest manner, that portion of the circular which relates to a "home department" in our government, which is rendered, daily, and every day, of more importance.

There is no nation in Europe, where there is not more attention paid to the home industry, by the Government, than is so paid to it here. Yet this would seem to be the country, of all others, in which those who labour should claim the fostering care of those who are selected to watch over the general welfare.

We see it daily and hourly put forth in our public journals, that the great object of government should be to produce the greatest happiness for the greatest number. Undoubtedly, those who believe this should join, heart and hand, to procure a "home department," through which the great results of the labouring classes can alone be properly ascertained and kept before the people.

France has her minister of the interiour; England her minister for the home department; Russia, Austria, and the German States, all have similar public offices, and officers; surely, then, when the industry of the United States has reached a thousand millions of dollars, annually, it is worthy of the superintending care of a special department of government.

In fine, the time has arrived, when our agriculturists should speak out, on this all important subject; they have only to say, through the ballot box, that it shall be, and it must immediately follow; for, in their hands is, happily, the power which can command it.

We are rejoiced to see that these subjects are now taken up in earnest by the American Institute, whose managers appear never to weary in well doing, and we wish them and their meritorious labours every possible success.

If the highest civic rewards are due to the individual who causes "one additional blade of grass to grow," we know not how we shall ever be enabled to estimate the value, to the whole Union, of such a band of patriotic brethren as compose the American Institute; who, persevering as they do, in every good word and work, in the all-important national cause of the home industry, must continue to advance, as they have already advanced, and spread abroad the name and fame of our beloved country; while they may be, literally, said to be using every endeavour to diffuse, far and wide, the blessings of peace, plenty, and happiness at home.

CIRCULAR.

NATIONAL CONVENTION OF FARMERS, GARDENERS, AND SILK CULTURISTS, AND FRIENDS OF AGRICULTURE GENERALLY, RESIDENT IN ALL PARTS OF THE UNION, ON THE CALL OF THE AMERICAN INSTITUTE OF THE CITY OF NEW YORK.

The American Institute has been prompted to issue this invitation to the Farmers, Gardeners, and Silk Culturists of the United States, in conformity to requests contained in resolutions passed at two former Conventions, viz: an Agricultural and Silk Convention held in this city, Oct., 1844, during the 17th Annual Fair.

It was deemed appropriate, because this Institution was incorporated by the Legislature of New York, in 1829, expressly to encourage the Agriculture of the United States, and so acceptably had this duty been performed in the estimation of the Legislature, that in 1841, when a State Agricultural Society was formed, this Institute was embraced in it, and constituted the sole representative of that interest in that association, for the City and County of New York, and was made the recipient of the bounty, which, in all other parts of the State, was apportioned exclusively to the County Societies. The City of New York was preferred for holding this Convention, because of its central situation, and the facilities of reaching it by land and water, and the time was designated during the great Fair as most convenient and most likely to ensure a full Convention, when hundreds of thousands are attracted to the great city, when specimens from the field and the garden of the highest perfection, from all parts of the country, are spread before the visiters.

The Silk Convention, which has been for two successive years held separate, will this year be united with the Farmers and Gardeners' Convention, and together they will constitute one Convention, which will open in the City of New York, on Thursday, the 9th day of October next, at half past 10 o'clock, A. M.

It is designed to concert measures which will give a more effective impulse to the efforts of agricultural improvement, by the collection of numerous facts from various localities and details of experiments, thus affording materials for science to extend its discoveries; this will impart dignity to the occupation of the agriculturist, and elevate it in the comparative scale of human industry proportioned to its inestimable importance. The powers of association, if judiciously brought in aid, will work wonders. Local societies might be formed and kept in continual communication with one great central society, concentrating at one point an accumulation of facts and experience for selection, arrangement, comparison, consideration, and publication, the value of which would exceed all computation. Such an organization should be commenced at this Convention. The numerous associations recently formed in various parts of the country, called "Farmers' Clubs," in conjunction with other older societies for promoting agriculture, afford the means for a beginning, and the manifest advantages flowing from them will lead others to follow the example. Practical means for the distribution of the best breeds of cattle, the new and best plants, seeds, &c., farming implements, machines, &c., should be considered. From the isolated condition and infrequency of communication and intercourse among farmers, discoveries of vast benefit to the human race have, for long periods, remained unenjoyed because unknown but to a few—the potato which now feeds millions, and the turnip that Englishmen assert *saves England*, may be cited as examples. Accident brought the cotton plant into the plantation States, which now afford materials for clothing hundreds of millions. Association will be sure to produce the more speedy development and extended realization of multiplied human comforts, and accelerate the grand march of our national improvement. The examination of specimens, the unceremonious expression of thought, and the interchange of views by the independent and noble lords of our soil, will enable each and all to return to their farms with renewed spirit and increased knowledge.

A full attendance is desired from that portion of our industrious citizens who seek not only to clothe our own people in silk, but afford commerce a material for other countries. That it is practicable, former Conventions have demonstrated—the skill and the improvement requisite, our ingenious fellow citizens are fast acquiring. The proceedings of the two last Conventions are replete with facts and accurately detailed experiments, affording the best guides extant for the American silk culturist. We hope to hear from those who contributed to this useful fund of knowledge again, with every experiment noted down to the latest time. Those who cannot come to the Convention, are requested to make written communications on any and all subjects appertaining to the objects of the Convention.

The premiums generally will be commensurate with our means. The number awarded at the last Fair were

20 Gold Medals,
29 Silver Cups,
104 Silver Medals,
150 Dollars in Cash,
444 Diplomas,
120 Vols. of Agricultural Works.

We are enabled, by the munificence of the Hon. Myndert Van Schaick, of this city, to offer this year from his donation of $1,000, the following special premiums, in addition to the premiums on other silk goods which will be given by the American Institute:

For the best piece of silk stuff, 27 inches in width and 60 yards in length, manufactured in the United States from native silk,	$50 00
For the best and greatest quantity of American silk, uniformly reeled, not less than 50 lbs.,	20 00
For the best sewings, of any colour, made entirely from American silk, not less than 10 lbs.,	10 00
For the best pea nut cocoons, not less than one bushel,	10 00

And to each of the successful competitors the "Van Schaick Medal."

Are there not opulent and patriotic gentlemen who will follow the noble example of Mr. Van Schaick?

Washington's favourite Home Department for agriculture, supported by the purse of the nation, enjoined in almost his last words to Congress, will again be brought before the Convention. A department whose widely extended and intelligent powers might, through our ministers, marshals, charges, consuls, missionaries, and commanders, by land and sea, do more in one year for the introduction of new plants and staples than could by any other means be procured in half a century—thus exhibiting to the world, for the first time in the history of man, the grand spectacle of national power exerting its vast force directly, to multiply and increase human comforts. It is only through the resistless appeals of such a Convention as is proposed, that the attention of government can be arrested. Nearly half a century has elapsed since the revered farmer of Mount Vernon—the Father of his Country—raised his voice in favour of such a department. His arguments carried conviction to all. Still, a measure shown by him to be fraught with unmixed good only, has slept to this day. Let those whose sweat and sinews procure the sustenance of our whole people, who never yet have been duly heard, nor represented, meet in one great Convention. It would form an agricultural power that could not fail to take a lasting hold on our people and our government.

We invoke the aid of the true friends of agriculture, the wise, the liberal, the intellectual, the patriotic and the noble who are found among all professions and occupations, and invite delegations from all our numberless associations and clubs. Come to this Convention, and unite your energies to carry into effect one of the most beneficient measures ever devised.

ADONIRAM CHANDLER,
EDWARD T. BACKHOUSE,
JOHN CAMPBELL,
JAMES VAN NORDEN,
H. W. CHILDS,
JOSEPH CURTIS,
GEO. ENDICOTT,
WM. HALL,
JOSEPH TORREY,
JAS. R. SMITH,
MARTIN E. THOMPSON,
ISAAC FRYER,
JOHN D. WARD,
EDWARD CLARK,
ROBERT LOVETT,
GURDON J. LEEDS,
A. D. FRYE,
T. B. STILLMAN,
JOSEPH COWDIN,
JAS. J. MAPES,
GEO. F. BARNARD,
C. C. HAVEN,
CHAS. MAPES,
JONATHAN DODGE,
T. W. HARVEY,
T. B. WAKEMAN,
Managers.

New York, August, 1845.

P. S. On the receipt of this circular please procure a notice of a meeting to be published, calling on the friends of agriculture in your section of the country to meet at a stated time and choose delegates.

Agricultural Societies, Farmers' Clubs, &c., that do not receive invitations direct, will, no doubt, obtain notice through the public papers, and it is hoped that they will take early measures to be represented in this Convention.

A GLANCE AT THE OLD WORLD.

Another arrival brings us our Magazines, for September, and we again indulge our curiosity and cast a glance at the literary, scientific, and artistic events of the last month, from which we are fast hurrying away.

SCIENTIFIC.

The Edinburgh Philosophical Magazine contains a number of valuable articles, but not of a sufficiently general and popular character, to make it necessary for us to notice them. We perceive by the report of the proceedings of the Geological Society, that the tertiary formations in the southern States, are the subjects of much investigation, and Mr. Lyell is busy with the subject. An invention has been patented to save manual labour and expense in tanning and dressing hides and skins, hastening the chemical combination of the gelatine of the hide with the tanning principle, and producing good leather in a short time. A description of the machinery to effect this, will be found in the London Repository of Inventions, for September.

Some improvements in the making and refining of sugar, have been patented by Mr. Johnston, and may be found in the same number.

Moritz Willkomm's interesting botanical notices, from Spain, alluded to in our last, are continued, and retain all their interest. He mentions having discovered, for the first time, in the Kingdom of Grenada, specimens of the Amaryllis Lutea, and in beautiful condition.

A gentleman of the name of Claussen is exploring the fossil remains of Mexico. The French Institute have purchased from him for the sum of four thousand francs the head of a large tiger, the upper canine teeth of which are nearly ten inches long. He has also discovered pieces of amber (not copal) in which spiders and spider webs are distinctly visible.

We hear the arctic expedition is fulfilling the public expectation. A letter from Mr. Goodsir, an eminent naturalist, dated July 7th, from Baffin's Bay, contains the results of the examinations and remarks up to that time.

Dredges have been sunk to the enormous depth of 300 fathoms, and interesting specimens of mollusca, crustacea, and coralline were obtained. Minute observations are being made on the icebergs.

An imperial printing press has been invented by Sherwin, Cope, & Co. by which the rotary is substituted in place of a reciprocating movement. It is an ingenious arrangement, and worthy the attention of our own enterprising machinists.

A steamer, called the Wonder, is now running on the Havre and Channel Island stations, which is highly approved and very popular. It is worked by *atmospheric pressure*, but how, is not ascertained in the notice we have read. It appears the Wonder is a very swift vessel and is doing well for her proprietors.

An electric gun is exhibited at Woolwich, which it is said, will discharge more balls during eighteen hours than two regiments of infantry firing at their greatest quickness. The expense of using it for that number of hours is about fifty dollars.

A singular fact has been stated in relation to the climate of Iceland. A letter read at a late meeting of the French Academy of Sciences, dated at Keykiavik, Iceland states that for an entire year there had been beautiful weather and scarcely any winter. The summer of 1844 was very fine, the meadows were green, and the fisheries abundant. We have no particulars as to the range of thermometer and barometer during this period.

A gentleman of the name of Hawkins is about to revive an instrument which formerly occupied his attention, and which he has now perfected, called the claviole, or finger keyed viol, producing the rich tones of violin, violincello, double bass, imitations of flute, flageolet, musical glasses, and organ, by the hand of a single performer. He proposes to visit the United States, for the purpose of exhibiting it, and inducing our musical instrument makers to engage in their manufacture.

We think we perceive a slight reaction in public sentiment in England on the subject of atmospheric railways. Several eminent engineers contend their chief defects to be these—the inability of the propelling power to control a train, great loss of power by leakage, and the great cost of the large stationary power necessary at short intervals.

The treatment of copper, lead, and silver ores, by an electro chemico process, extracting the metal with ease, has been submitted for examination to the Academy of Sciences in Paris. The description of the process may be found in the Comtes Rendus, for last July, or in the London Chemical Gazette, for September.

The gold mines of Russia have produced between the years 1815 and 1844, the enormous sum of twenty-four millions of pounds sterling. The platina mines, since 1819, when they were first worked, produced £25,120,000 sterling.

A young English traveller has succeeded in ascending the Wetterhorn, a mountain hitherto considered inaccessible.

A lithographic printing press has been patented in England, which gives off 30,000 copies in twelve hours. The paper is laid on the stone, and taken off by machinery, and the stone is inked and wet in a similar way.

A telegraph for railways has been invented, to show where a train is at any moment of its passage. Wires connected with the termini are fastened to springs. As these are pressed by the wheels, in passing, a signal is given at the station by the wire.

The inventive spirit of the age is everywhere at work, and results are obtained that a few years ago would have been deemed impossible.

FINE ARTS.

Pencil drawing, is now a branch of education in all the primary schools of France. We cannot but admire the good sense, which has made this art, in their system of education, an indispensable one for their young men and women. The want of this accomplishment is seriously felt in the United States. If our mechanics understood drawing, their fabrics would be as elegant in design as they are now durable in material. Very few American works are illustrated in an artistical manner, because our travellers do not know how to use the pencil. We have recently seen an interesting, and elegantly printed work, published in this city, vulgarized and injured by its engravings, the copies of poor and shabby drawings. We have understood that free schools for drawing, or schools of design are to be established in New York, during the ensuing winter, for the purpose of instructing those of our young men, who intend to devote themselves to the mechanic arts. In England, similar establishments have recently been formed in all the principal manufacturing towns.

On the Continent, we perceive that statues, casts, and paintings are employing the attention of the virtuosi. We do not perceive any announcements essentially important, except as mentioned below.

A museum is to be established in Manchester, to be devoted to the illustration of the useful arts, at an expense for the building alone, of half a million of dollars.

The Beethoven enthusiasm, in Germany, is at its height. The young men smoke Beethoven segars, and wear trowsers which are striped like music paper, and dotted over with minions, crotchets, and quavers. And here we may as well mention an anecdote of Pischek, a fine singer, who was present at the recent musical festival at Bonn. Having no part in the mass or choral symphony, he went among the bass chorus singers, and sang with them. What first class musician, in this country or England, would have thrown aside his sense of self-importance on such an occasion?

We perceive that an English Company have again proposed to drain the Tiber, for the purpose of securing the valuable monuments of antiquity supposed to be concealed there. Meantime a crack in the dome of St. Peter's has been discovered, much to the alarm of the Romans. Every means has been resorted to, to prevent further injury.

The musical writings of Labitsky are so popular in the United States that we cannot forbear giving a brief notice of him. Joseph Labitsky was born in 1803, at Petschau, where his father was a cloth dresser. There lived in that village, a chapel master, named Viet, who was celebrated for the magnificent music he introduced into its churches. Labitsky was his pupil, and after pursuing his studies till 1821, joined the band at Carlsbad as a flute player. He then proceeded to Munich, and took lessons under Winter. In 1824-5, he went to Vienna with a party of musicians and performed there. In 1831, he was at Warsaw and witnessed the breaking out of the revolution. In 1834, he accompanied a band to Prague and there published his first waltzes, Zigouner Tanze. Since 1835, he has directed the music at Carlsbad, and has published upwards of 107 collections of pieces. In 1840, he took his band to Russia and was received by the Emperor's family with marked distinction. In 1843, he undertook the direction of the Philharmonics of Carlsbad, a very flourishing association. Labitsky, at present performing chiefly on the violin.

Halevy, the celebrated composer, is engaged on a four act Opera, to be completed by next March. The libretto is by Hyppolite Lucas.

A few bits of foreign Art-gossip may interest our readers. The exhibition of the Fine Arts is open at Munich, being the first exhibition of the kind which has taken place in that capital for the last seven years, attracting more than common interest, and is said to be largely contributed to by foreign artists.—The principle of monumental commemoration makes rapid progress—particularly in France.—M. David's bronze statue of Jean Bart, for Dunkirk, is finished, and was to have been inaugurated on the 7th of September. The description of this work given by the Art-journals of Paris, suggests a remarkable resemblance to the design of Mr. Kirk's "Sir Sidney Smith," exhibited at the Royal Academy, in the present year.—Raggi's statue of the late Duke of Orleans is also finished, and will be inaugurated, at St. Omer, in the course of this month.—The Municipal Council of Epinal has voted 3,000 francs towards the erection, in one of the public places of that town, of a statue of Claude Lorraine:—and the Municipal Council of Falaise has contributed 3,000 francs, that of Bayeux 200 francs, and that of Rouen 500 francs, towards the monument of William the Conqueror. The Municipal Council of Aurillac has determined on the erection of a bronze statue, in one of its squares, to the memory of Gerbert, who was preceptor to Robert, King of France; and became Pope, by the title of Sylvester II.—the first Frenchman who filled the chair of St. Peter. At Copenhagen, the equestrian statue, in marble, of the late King Frederick the VI., was inaugurated a few weeks ago, at Skanderborg, near Aarhus, in the province of Northern Jutland. This work is the last of which the illustrious Thorwaldsen completed the model.

Mr. Mitchell, the clever translator of Aristophanes, was the son of a celebrated riding master in London. He died last May, while completing a work with latin notes.

We have met with some curious facts in relation to literature and education in Russia, and its appendage, Poland. There are eleven academical districts, containing 2,213 places of public instruction, viz:

Universities,	6
Institutions of high branches,	83
Arrondizement Schools,	447
Elementary and Primary Schools,	1,070
Private Academies,	607
Total number of pupils,	112,408
Number of students at the Universities,	3,274

There has also been commenced the system of educating females of the humbler classes, and eleven of them are in operation.

The Emperor's library in St. Petersburgh is open three days in a week to the public, and contains 442,785 printed volumes, and 14,477 manuscripts. The number of public libraries in Russia is forty-two, mostly created since 1835, and the number of learned societies is thirteen.

The importation of books into Russia is large and increasing, 600,000 being the number the last year.

Parts 2 and 3 of Von Humboldt's Cosmos, have appeared in London, and are in progress of publication here by the Harpers. This splendid production is everywhere read with avidity.

The Letters from Italy, by our countrymen, Mr. Headly, and Dashes of Life with a Free Pencil, by Mr. Willis, have been republished in England. The critics divide their censure and praise pretty equally, in both instances.

Among the latest announcements we perceive the following.

Scenes on the Shores of the Atlantic by the admired author of A Summer in Germany.

The Ruling Passion—a novel.

Legends of Belgium, by M. Delapierre, an attache of the English embassy.

Rome, Its Social and Ecclesiastical Life.

The Attractive Man, by Mrs. Trollope; and another series of poems by Eliza Cook. In the introduction to them, she makes the following remarks, which we quote, as they throw a new light on her character:

> "I can only write from my heart, and that heart has been left from infancy to the mercy of its own intense impulses. My rhyming tendency developed itself at a very

early age; but the tones of judicious praise, or improving censure, never met my ear. The advantage of an enlightened, nay, even a common education, was denied me, lest knowledge should only serve to foster poetry, and make 'a sentimental fool' of me. I was left, like a wild colt, on the fresh and boundless common of nature, to pick up a mouthful of truth where I could. The woods and forests became my tutors; the rippling stream, and bulrush sighing in the wind, whispered to me in sweet and gentle breathings; the silver stars in the measureless night-sky, and the bright flowers in my morning path, awoke my wonder, and opened the portals that led to the high and mysterious temple of thought. God and creation were before my eyes in all their glory, and, as an untaught child, I worshipped the Being who had endowed me with power to contemplate his works and "rejoice therein.'"

Charles Knight & Co. have published a small volume on British manufactures, in which marble, stone, glass, carpets, floor cloths, piano fortes, watch and clock, and cabinet manufactures are treated.

A people's cheap edition of the naturalist's library is commenced, to be published in parts.

A Manual of Astronomy by John Drew has appeared, with the approbation of Sir John F. W. Herschel, intended to be a popular explanation of the subject, to those who are not familiar with mathematical science. This should be republished here.

Michelet's work, Priests, Women, and Families, has made a great sensation in Europe. There is a mixture of fact, philosophy, and declamation in this production, rather unsuitable according to our ideas, to so grave a subject. As education is, however, one of the most frequent themes of American writers, we will quote the following remarks of Michelet on its form in early life:

"Education! a mere trifle, a weak power, no doubt, which the father may, without danger, allow his enemies to take possession of! To possess the mind, with all the advantage of the first possessor! To write in this book of blank paper whatever they will! and to write what will last forever! And, remember well, it will be in vain for you to write upon it hereafter; what has once been indited cannot be erased. It is the mystery of her young memory to be as weak in receiving impressions, as it is strong in keeping them. The early tracing that seemed to be effaced at twenty re-appears at forty or sixty. It is the last and the clearest, perhaps, that old age will retain. What! will not reading, and the press, the great overruling power of our own days, give a stronger education than the former one? Do not rely on this. The influence of the press partly annuls itself; it has a thousand voices to speak, and a thousand others to answer and destroy what it has said. Education does not make so much noise; it does not talk; it reigns. Look, in that little class, without witness, control, or contradiction, a man is speaking; he is master, an absolute master, invested with the most ample power to punish and chastise. His voice, not his hand, has the power of a rod; the little, trembling, and believing creature, who has just left her mother's apron, receives his weighty words, which enter the soft tablet of her memory, and stick into it, like so many nails of iron."

The translations of the American Ethnological Society, have been published in London. M. Gallatin's notes on the semi-civilized nations of Mexico, Yucatan, and Central America, are very highly approved.

Phonagraphy is attracting some attention in England. The following works have recently appeared:

Alphabet of Nature, by A. J. Ellis, B. A.—*The Phonographic Class Book*, by J. Pitman.—*The Phonotypic Journal*, Vols. 3 and 4.—*A Plea for Phonotyphy and Phonography*, by A. J. Ellis, B. A.—*A Manual of Phonography*, by J. Pitman.—These, and some other books and pamphlets of the kind, contain a new system of spelling, both for printing and writing. Discarding all etymological principles, they teach that the sound of the words should be our only guide in the construction of words.

M. Lamartine has sold his History of the Girondins to Coquebert.

M. Paris, a member of the Academy of Inscriptions, and *conservateur-adjoint* in the manuscript department of the *Bibliotheque Royale*, has undertaken to prepare not only a Catalogue, but a history of all the MSS. in the French and other living languages of Europe, existing in that institution. This history will include the material description of each volume—the particulars known, or notions entertained, regarding it—relating, for example, to its copyist—the persons in whose possession it has been—the time and motives of its acquisition by the Royal Library—and a notice of the author, and the merit of his work. The conservators of the *Bibliothèque Royale*, recognizing the importance of such a work, have determined that half the price of printing it shall be borne by the establishment.

The leading foreign journals contain some very valuable articles. The presumption of some unlearned men who are endeavouring to overthrow the well established laws of nature, has brought forth into intense action some of the ablest minds of the age.

With regard to those subjects which have been used in these investigations against the history of man and of the world as contained in the Old Testament, it is a curious fact, that the ablest defenders of the Christian faith are found among the laity.

SCIENTIFIC OBLIGATIONS.

We are indebted to Arabia for arithmetic and algebra, and the Moors for astronomy and geography; we owe entirely to Greece every species of elegant literature, for in the Latin poetical writers we find scarcely one single original thought. To the ancients, too, how much are we indebted for the useful arts! Arachme invented the distaff; Pamphyla the art of using cotton; a Phrygian lady, needle-work; Praxeteles, looking-glases; the Syrians discovered scarlet and purple dyes; and the Ledonian ladies first practiced embroidery; Moschus invented weights and measures, to perpetuate the memory of which the Greeks dedicated the celestial sign Libra; Prometheus first taught the art of striking fire from flints and steel; an Egyptian made the first lamp, and King Alfred of England the first lantern; Anacharchis the first pair of bellows; Peseusippus the first cask; a Spaniard the first sieve; a Scythian the first anchor, and Eriethonicus the first chariots, and harness for horses. Homer speaks of gimlets and planes, axes with a double edge, a level, and a rule; but he never alludes to a saw, a compass, or a square. Archytas invented the screw and pulley; Perdix the saw; Dædalus the axe, the whimble, and the wedge, his grandson the lathe, and Anacharsis the pottery wheel. Ctesebus invented the pump, a water-clock and other hydraulic instruments; and Nicius discovered the art of fulling cloth. Rhœcus and Theodorus of Samos invented the forging of iron statues, and casting copper ones. Cybele the daughter of Mars King of Phrygia, invented the tabor, the cymbol and the flageolet; and Castor and Pollux reducing motion to a science, gave rise to the art of dancing; while Gargoris, King of the Cecretes, first taught the method of taking honey from bees. Aristœus discovered the art of expressing oil, and making cheese, an art long unknown to the Germans though they used milk and whey curds and butter.

The list of our obligations might be considerably extended. But though we are indebted to the ancients for many important hints, we have been far more successful in the useful arts. They had no wind-mills, or water-mills, no spectacles, no types for printing. If we except the arts of painting, sculpture, poetry, and music, they were immeasurably behind us. What would Dædalus say could he be introduced into one of our machine shops?

NOTICES OF NEW BOOKS.

The Life of Francis Marion; by W. Gilmore Simms, author of "Yemassee," "History of South Carolina," etc. New York: Henry G. Langley, 8 Astor House. 1845.

This life of one of the most enterprising and popular Generals of the Revolution, from the pen of a writer so favourably known to the public, cannot fail to meet with a general welcome.

Among the many gallant spirits who were aroused to deeds of the highest chivalry and renown in the ever memorable cause of the American Revolution, no name deservedly stands higher than that of General Marion; and his biographer appears to us to have caught the true spirit by which the General was actuated, in a short but highly expressive picture given of him at page 146 of this book, which we transcribe with pleasure, as best calculated to create a desire to know the exploits of a hero who richly merited the encomium here passed upon his noble and daring character. It is as follows: "He was the true model of a partisan, in a country like ours, of swamp and thicket; leading the persevering foe like Tuck 'through bog and through brier,' till he wearied out his patience, exhausted his resources, and finally laid him open for defeat. He seldom lingered long in any one spot, changing his ground frequently with Indian policy; his scouts well chosen, were always on the alert; and by constant activity and enterprise, he not only baffled pursuit, but deprived defeat of its usual mortifications." The work is well printed, and interspersed with spirited and appropriate engravings.

The Half Yearly Abstract of the Medical Sciences, being a Practical and Analytical Digest of the Contents of the Principal British and Continental Medical Works published in the preceding six months. Together with a Series of Critical Reports on the Progress of Medicine and Collateral Sciences during the same period. Edited by W. H. Ranking, M. D., Cantab. Physician to the Suffolk General Hospital. Vol. I., January to June, 1845. New York: J. & H. G. Langley, 8 Astor House, Broadway. G. B. Zieber & Co., Philadelphia. Jordan & Wiley, and Redding & Co., Boston.

Of course, we can say nothing of the merits of this work. Its title gives it claims, which will, no doubt, be duly appreciated by the medical profession.

The Medici Library of Italian Prose. Vols. 2 and 3. The Florentine Histories: by Nicolo Machiavelli. Vol. 4. The Citizen of a Republic; by Ansaldo Ceba. Translated and edited by C. Edwards Lester. New York: Paine & Burgess, 62, John street. 1845.

The above works are translated from the Italian by C. Edwards Lester, Esq., our late Consul at Genoa, and will be cordially welcomed by the friends of literature in the United States. There are other English translations of Machiavelli's Histories, but this, we believe, is the first American edition of any of that great writer's works. There is no doubt that the character of Machiavelli has been much misunderstood, as his satire on tyranny, called "*The Prince,*" was so artfully disguised, that it seemed composed as a manual for despotic and corrupt sovereigns; and his name in consequence of his design having been mistaken by the wise and good, has passed into a by-word of atrocious skill. In his own country, however, he has been better understood, and his memory is cherished as a great statesman, a devoted patriot and a political writer of almost unequalled excellence, "whose singular talents were given, (to use the language of a competent critic,) with the highest constancy, and through severe personal misfortunes to the service of his country and its liberties." One of the best of English scholars, Gray, the poet, who travelled in Italy, says, "I rejoice when I see Machiavelli defended or illustrated, who to me appears one of the wisest men that any nation, in any age, has produced."

Whatever difference of opinion may prevail respecting "The Prince," by Machiavelli, none can be entertained respecting the Florentine Histories, which will be found quite unexceptionable, and one of the most entertaining works ever written. Of Mr. Lester's translation, competent critics have spoken in terms of high praise, and, we believe he has faithfully given the spirit and manner as well as the facts narrated by his great original. "The Citizen of a Republic," by Ceba, a Republican of Genoa, is a work quite unique, delightful, and instructive. This writer, as well as Machiavelli, flourished in the 16th century, soon after his great fellow-citizen, Columbus, and this volume, which has formed a manual or text book for the republicans of Italy, was written when Ceba was in his old age. Of his political works which are all unknown to Americans, this, the translator informs us, is considered the best.

It sets forth in pure and lofty style which is at once attractive and surprising, considering the period when it was written under a republican government, and is peculiarly adapted to the study of American youth, while those of any age may peruse it with delight. To illustrate his noble sentiments the author brings to his aid all the wisdom of the ancients, and the testimony of history, he shows, confirms those wise maxims which are the foundations of civil concord and prosperity.

Wiley & Putnam's Library of Choice Reading. Bubbles from the Brunnen; by Sir Francis Head. New Yotk: WILEY & PUTNAM, 161 Broadway. 1845.

Among the many good things with which the publishers of this library often treat the public, we venture to say with great confidence, few have more merit in their way than these "Bubbles from the Brunnen." They purport to be nothing more than hasty sketches of what passed under the notice of the writer, a valetudinarian, "sentenced in the cold evening of life to drink the mineral waters of one of the bubbling springs, or Brunnen of Nassau."

However, the writer of the interesting incidents narrated, in the twenty-one tales into which he has here divided them, may himself have felt as in "the cold evening of life" he has grouped together, scenes, which we venture to say will excite a lively and agreeable warmth, about the region of the heart in all who are destined to the happiness of reading them. We exceedingly regret the narrow limits to which we are confined, in these, our notices, else would it delight us to make some extracts from these "*bubbles*," of thrilling interest. As it is, we can only say we have seldom met with a greater treat than they offer to those who would have their best feelings called forth in the best manner.

Wiley & Putnam's Library of American Books. No. 4.

This volume of the Library contains under the title of "The Wigwam and the Cabin," seven tales by W. Gilmore Simms—"Grayling," or "Murder Will Out." "The Two Camps," a legend of the old North State. "The Last Wager, or the Gamester of the Mississippi." "The Arm Chair, or Tuestenugge," a tradition of the Catawba. "The Snake of the Cabin." "Oakatibbe, or the Choctaw Sampson." "Iccasee," a Cherokee legend.

These tales are the accumulations of several years; were mostly written for the annuals, separately, and are now published in this cheap form that all may have an opportunity to purchase them. These being all of domestic origin, from a celebrated author, and pourtraying scenes connected with aboriginal history, should make them popular, as they are, no doubt, full of interest.

No. 5, of this Library, comes to us under the name of "Big Abel and the Little Manhattan; by Cornelius Mathews.

We have only had time to look hastily through this story, which appears to be entirely local, relating to scenes in this city. What we have read has excited our curiosity. It makes no pretensions; but is one of those narratives, which many will, like ourselves, feel a desire to read.

Democracy in America, in Relation to Political Institutions; by Alexis De Tocqueville, Member of the Institute of France and of the Chamber of Deputies, etc., etc. Translated by Henry Reeve, Esq. Adapted for the use of Schools and District Libraries, by John C. Spencer, Counsellor at Law. New York: J. & H. G. LANGLEY, 8 Astor House. 1845.

We are much pleased to see De Tocqueville's work republished in this convenient form, with the valuable notes of Mr. Spencer. No foreigner who has visited this country and written upon our institutions has done so, in a more catholic spirit and with more honest views; and although we by no means agree with him in all his premises or conclusions, we are not the less alive to the many sensible and judicious observations contained in this work, and cheerfully recommend its perusal to all those who have not already had that pleasure.

Silliman's American Journal of Science. Published at New Haven, Conn.

This periodical, which has always been held in high estimation in Europe and America, has now reached its fiftieth volume, having been continued through a period of nearly twenty-eight years. It has been heretofore issued in quarterly numbers, but after the first of January next, the editors inform us it is to be published every other month, or six numbers of 140 to 150 pages each, annually. The 50th volume, soon to be issued, is to comprise an Index to the 49 preceding ones. The eminent position which Professor Silliman occupies among scientific men is a sufficient guarantee of the character of the work, and in his editorial labours, he is assisted by his son, Mr. B. Silliman, Jr., and Mr. James D. Dana.

THE

NATIONAL MAGAZINE

AND

Industrial Record.

VOL. I. NEW YORK, NOVEMBER, 1845. No. VI.

HISTORICAL SKETCH OF FRENCH COMMERCE,

FROM ITS RISE TO THE PRESENT TIME.

It being our purpose to give an account of our trade with France, as shown in the public documents of our trade and commerce, up to the 30th June, 1844, we have thought it may not prove uninteresting to give some account of the rise and progress of French commerce, from its early commencement—since it will but add another proof to the grounds we have taken, that commerce only prospers while the industry of a country is fostered and protected. Nothing is said of France, as a separate country of Europe, until the reign of Clovis, A. D. 481, who possessed all the country lying between the Rhine and the Loire, the Burgundians, about this time, having in their possession all the tract of land from the forest of Vosges to the sea of Marseilles on one side, and the Alps on the other. Clovis died in 511, and his vast dominions were divided among his four sons, to whom a series of weak and wicked princes succeeded, under whom France was reduced to more than its ancient barbarism; from which it does not appear to have emerged till the reign of King Pepin, in 752. But it was not until the accession of Charlemagne, his son, in the year 768, that the kingdom became noted for any political power. We find no maritime expeditions from Pharamond to Pepin, excepting only one under Charles Martel, the father of the latter, who vanquished the Frisons at sea in 728, and laid waste the isles Amstrach and Austrach. Charlemagne made several new havens and built new ships, and vanquished the Saracens before Genoa. At or about the years 782 or 788, a league was made between France and Scotland. In 785, or, as others say, in 794, Charlemagne transplanted ten thousand of the principal families of Saxony into Brabant and Flanders, and others of them into Switzerland. Morisotus, in his "Orbis

Maritimus, Lib. 2, Cap. 7," says "the French fleet of King Louis II., styled the Stammerer, vanquished the Saracen fleet twice on the coast of Italy in 878. From this time till the year 1097, when France embarked in the Holy War, in the reign of Philip I., Morisotus finds no maritime wars or expeditions. Puffendorf, and many other authors, state that such was the weakness of the French monarchy, that Hugh Capet, who ascended the throne in 987, found himself under the necessity of conferring on the nobility what Charles the Simple had supinely permitted them to assume—viz: the titles of counts and dukes of the provinces they governed, with the bare reserve of their vassalage to the crown. Such were the dukes of Normandy, Burgundy, Brittany, Aquitaine, Gascony, Languedoc; the counts of Flanders, Champagne, and Toulouse; but the countries of Savoy, Dauphine, and Provénce, were then part of the German Empire, as belonging to the Kingdom of Arles. Hugh Capet, however, found means to annex to the crown the County of Paris, the Dutchy of France, as it was then called, all the lands between the Seine and the Loire, and the County of Orleans. From this time till 1201, we hear of no maritime expeditions in France. The barons of France, under the reign of Philip Augustus, according to "Favine," in his theatre of honour, "undertook the conquest of Constantinople from the Greek Emperor, but they sailed from Venice; France at that time having nothing to do upon the seas." The first mention of the appointment of a French admiral is in the year 1286, according to "Morisotus."

In Volume III., page 482 of the Federa, it is stated that Louis X., King of France, complains to Edward II. of England, that "whereas the English wool merchants, who had before kept their staple at Antwerp, had been permitted by him to settle their staple at St. Omers, under his protection, hoping that thereby great benefit would accrue to his kingdom; nevertheless the said English merchants at St. Omers do omit going with their wool to the fairs at Lisle, to the great prejudice of his people—although they constantly frequented those fairs when they held their staple at Antwerp, and although St. Omers be nearer to Lisle than Antwerp is." From hence we learn the great antiquity and importance attached to these wool fairs.

Voltaire, in his General History of Europe, speaking of the state of France about this time, (1360,) says, "she was so exhausted that she could not make payment of the first instalment for the ransom of King John, which was to be six hundred thousand crowns—the whole ransom being three millions of crowns—so that they were obliged to recall the banished Jews, and sell them the privileges of living and trading in France. The King himself," says this writer, "was reduced to the alternative of paying for the necessaries of his household *in leather money, in which there was a little nail of silver.*"

In 1429, the "Annales Flandres," and many other histories, give a melancholy account of the situation of France about that time. Much of its lands lay uncultivated and overgrown with briars and thorns, infested by wild beasts, and its people reduced to poverty and desolation—whilst, by way of contrast, Flanders and Brabant, from their internal inindustry and woollen manufactures, of which they exported largely, abounded in riches, plenty, and all kinds of merchandises, under their sovereign Philip, styled the Good Duke of Burgundy. Their cities were magnificent, their towns and villages wealthy, their houses well supplied with good furniture and decorations; and in short, their whole people enjoyed the utmost plenty.

It was in this time of the full prosperity of the Netherlands, occasioned solely by their vast woollen manufactures, that their wise and good Duke Phillip, on the day of his marriage with Isabella, daughter of John I. of Portugal, by Phillippa, eldest daughter of John of Gaunt, Duke of Lancaster, instituted in his famous City of Bruges, then the richest city of his large dominions, a new military order, which he named the Golden Fleece; which order has ever since made a splendid figure in Europe. In Bishop Huet's preface to the Memoirs of the Dutch Trade, a most extraordinary account is given of one "Jaques Couer," who was Intendendant General of Finance to King Charles VII. of France, and was at the same time the most famous merchant, not only of France, which, indeed, had very few merchants in those times, but of all Europe, and proved the main instrument of that great revolution in Normandy, in its conquest by King Charles—"Couer having supplied the King with an army and with seven millions of money, and yet had still vast wealth remaining to himself. Couer was so much addicted to commerce, that even while he held his high station under the crown, he had a great many large ships trading to the Levant, to Egypt, and to Barbary—from whence he imported gold and silver stuffs, silks of all kinds, furs, &c., which merchandise he sold by his factors, clerks, and agents, at the Hotel Royal, in all the principal cities of France, and in foreign courts, where the people, greatly admiring them, bought them up at high prices." "He had," says Monsieur Huet, "three or four hundred commissaries, or factors, and gained alone more in one year than all the other merchants of the kingdom together."

In Volume XII., page 86, of the Federa, it appears that in 1478 a new treaty was set on foot, which was perfected in the following year, for prolonging the truce between England and France to one hundred years after the death of one of the two Kings, Edward IV. and Louis XI.; and also, that the annual payment of 50,000 crowns should be continued to Edward's successors, for the said term of one hundred years; and the directors of the Bank of Medicis, at Florence, were to be bound for the payment of the said annuity. This truce, it is said, was concluded to avoid any discussion of the title of England to the provinces she had formerly held in France. In 1498, a ratification and confirmation of a treaty by King Louis XII. with King Henry VII. of England took place, by which it was stipulated that ship masters and owners of ships, should give security in double the value of the ship and cargo, not to commit piracy, or molest the subjects of the other party, of which the shipmaster was to make oath. Various other stipulations were now made for preventing pirates from selling their spoils in the ports of either party.

In 1508, Aubart, a Frenchman, first sailed up the river St. Lawrence, to Canada, from whence he took home to France some of the Indian natives. In 1521, the French first commenced the manufacture of silk, having been supplied with workmen from Milan, whilst France held that noble dutchy. In this manufacture, they made a very quick and rapid progress—it having then, and ever since, been carried on in Lyons, and other parts of the south of France—with which, to their great profit, they supplied many parts of Europe; and until England, long after, engaged in the same manufacture, it was the means of draining her of great sums of money. It was not, however, till some time after this, that France began to raise raw silk from the worms. In 1526, the famous treaty of Madrid was made between France and Spain. The only commercial conditions of this treaty were—1st. That only the ancient customs and duties on merchandise should be paid, annulling the new imposts laid on, within twenty years past, on either side, and particularly those on wines and salt; 2nd. That the prohibition by France that the woollen cloths made in Catalonia, Roussillon, and other parts of the Kingdom of Arragon, should not be brought into France, be repealed so far, as that the said cloths, and likewise other Arragon merchandise, may be freely carried into France, either by land or sea, *yet not to be sold there*—but merely in order to their being carried through France into other countries, whereby the many hazards of a long sea-carriage may be saved.

Thus we see that Spain, in those early times, had manufactures of woollen cloth, before the treasures from Mexico and Peru had poured in amongst their people, in such abundance as to cause them to grasp at the shadow and neglect the substance of national wealth.

The year 1540 was the first wherein France made any attempt at a settlement in Canada, Jaques Cartier having now sailed again from St. Malo with five ships, up the St. Lawrence, four leagues above the haven of St. Croix, where he jointly with the Baron de Roberval erected a fort. Others make Roberval's first going to Canada to be in the year 1542, with two hundred men and women. According to Puffendorf, the first alliance between France and Sweden commenced in 1541.

Wheeler, who wrote in 1601, says, "In 1560, Antwerp sent to France precious stones, quicksilver, silver in bullion, brass wrought and unwrought, lead, tin, vermillion, azure, blue, and crimson dye, sulphur, saltpetre, vitriol, camlets and grograms of Turkey; English and Netherlands cloths and serges; great quantities of fine linen, tapestry, leather, peltry, wax, madder, tallow, dried flesh, and much salt fish. And France sent to Antwerp, by sea, salt of Brouage, to the value of 180,000 crowns; forty thousand bales of fine wool of Toulouse, amounting to 300,000 crowns; canvas, and other strong linen of Bretagne and Normandy, in immense quantities; about forty thousand tons of excellent red and white wines, at about twenty-five crowns per ton, amounting to 1,000,000 of crowns, or 2,000,000 of Holland guilders; saffron, syrup of sugar, turpentine, pitch, paper of all kinds, to a great value; quantities of prunes; Brazil wood—the French having then a settlement in Brazil; many fine and curious things in gilding; fine cloths of Paris, Rouen, Tours, and Champagne; much thread of Lyons, which is highly prized—but not one word as yet of silk manufactures, that time being not yet come; excellent verdigris of Montpellier; and lastly, many sorts of merceries, to a great value.

The French appear to have traded very early to the coast of Guinea and its neighbourhood; for in the second volume of Hackluyt's Voyages, the writer of an English voyage to Guinea in the year 1591, says that about thirty years before that time the French traded from the ports of Normandy to the river Gambia with four or five ships annually.

Some French, assisted by Admiral Chastillon, or Coligny, made an attempt, in 1562, to settle and fortify in Florida, but not being supported from home, they were forced to abandon the enterprise, being almost famished for want of provisions, in the year 1564, after remaining in Florida two summers and one winter. They again attempted to settle in Florida, as will be more fully seen, in the year 1567; but being mostly Protestants, designed by the latter admiral to get a footing there, they were in part cruelly destroyed by the Spaniards, and partly also through intestine divisions; and not being well sustained from France, by reason of the civil war there, the design was abandoned. The same year Admiral Coligny encouraged a project for a settlement on the southeast coast of Africa, near Mozambique, to serve as a safeguard to their Eastern trade; and three ships with twelve hundred soldiers were sent out, but they were wrecked on the island of Madeira, and, after a scuffle with the Portuguese, returned to France without further pursuing their original design.

About the year 1590, King Henry IV., of France, brought the silk manufacture of that country to great improvement. Before this time, the silkworm and mulberry trees had been propagated only in the more southern provinces of France, first in the Lyonnois, Dauphine, Provence, and Languedoc; but that King not only carried it as far north as Orleans, but brought silk to be a universal manufacture in France. The manufacture of cloth, both woollen and linen, was likewise much propagated in that King's reign, as also many other mechanical works; so that the French, says "De Wit's Interests of Holland," could now supply others with more manufactures than foreigners could take off—whereas formerly, the people of France subsisted by tillage and vine-dressing. Mezerai says, "That King Henry, IV. attempted to breed silkworms at the Thuilleries, in Paris, and caused great numbers of white mulberry trees to be planted in all the adjacent parishes; but the attempt was not crowned with success."

"Till about this time," (1590,) says Sir Philip Meadows, in his observations concerning the dominion and sovreignty of the seas, from the memoirs of the Duke de Sully, "the naval strength of the Crown of France was about half a dozen ships of war, such as they were, at Brest and Rochelle, and about a score of galleys in the Mediterranean; but this King dressed a new plan of the French monarchy; and though his great designs were interrupted by a premature death, and also by a succeeding minority, yet the great Cardinal Richelieu resumed it again. *He* first taught France that the *fleurs de lis*, could grow at sea as well as on land, and adorned the sterns of his new-built ships with the prophetic inscription:

"Florent quoque lilia ponto."

Puffendorf states, that in 1599, "the new manufactures growing up in France, more especially that of silk, drew great wealth into that kingdom. In Richelieu's Political Testament, we find that France, at that time, about 1635, abounded with the finest and best manufactures, such, says he, "as the serges of Chalons and of Chartres, which have abolished those of Milan; and the Turks prefer the 'draps de sceau' of Rouen to all others—next to those of Venice, which are made of Spanish wool. Such fine plushes are made at Tours that they are sent into Spain, Italy, &c., as are also fine plain taffetas. Red, purple, and spotted velvets, made finer here than at Genoa. France is also the only place for silk serges. Mohair camlet is made as good here as in England, and the best cloth of gold, finer than in Italy."

In 1641, England began to be jealous of the increasing prosperity of the manufactures and commerce of France, for in this year a work was published, entitled, "England's Safety in Trade's Increase," in which the writer, one Henry Robinson, expresses his fears lest France should in time be able to beat England out of her trade; "more especially," says he, "when Christendom shall be at peace, whereby the trade of Spain will be free for other nations, which at present, as it were, we monopolize to ourselves.

In 1646, according to Savary's Dictionnaire Universelle du Commerce," the manufacture of fine woollen cloths was first settled at Sedan by three Frenchmen, who had a patent for twenty years, to be the sole directors of the manufacture of cloths. They had each a pension of five hundred livres for life, and their children were thereby nobilitated in France; and their foreign workmen declared to be denizens of France; free from being quartered on by soldiers, and from all taxes and excises. The directors were also allowed eight thousand livres, yearly, for carrying on that manufacture during the said term." And adds Savary, "the success has even exceeded expectation, the Sedan cloths having been brought to great perfection."

In 1661, Charles II., of England, delivered up to France, Nova Scotia and such parts of Canada, say the historians of that period, as was held by the English colonists.

"In 1662," says Voltaire, in his Age of Louis XIV., "the French Royal Council of Commerce was first erected, which still subsists, and that the King himself presided therein once in every fortnight.

In the year 1664, and during the minority of Louis XIV., his able minister, Colbert, commenced his wise plans for the advancement of the commerce and manufactures of France, the foundation of which had been laid by Richelieu. It was his policy to build up a solid, substantial home industry, for which purpose he granted numerous immunities, premiums, protections, &c., to foreign artists, artificers, manufacturers, &c., from all parts, to settle with their families and workmen in France. He induced the King to grant one million of livres annually for the improvement of the woollen manufacture, *alone*. So far also had the culture of raw silk been improved, early in this King's reign, on the plan of his grandfather, King Henry IV., that a considerable quantity of it was raised this year in France, better than that of Avignon or even Messina.

In the same year was erected an exclusive East India Company for fifty years; their limits being from the Cape of Good Hope, eastward, to the farthest East Indies; and from the Straits of Magellan and Le Maire, westward, into all the South Seas; soon after which they possessed themselves of Pondicherry, on the Coromandel coast. In the same year Colbert erected a new exclusive West India Company, its limits being—

First. That part of the continent of South America lying between the Rivers of Amazon and Oronooka, with the adjacent islands.

Second. In North America, all Canada, down to, and behind Virginia and Florida.

Thirdly. All the coast of Africa, from Cape De Verde, southward to the Cape of Good Hope.

About the year 1667, Colbert set in operation the famous tapestry manufacture, at the Gobelins, in Paris—procuring from all foreign parts drawers, designers, painters, dyers, and engravers; also, all sorts of workers in gold, silver, ivory, brass, &c.—which, under the direction of the famous Le Brun, were brought to great perfection. So, also, every possible means were resorted to, to improve all old manufactures and introduce new ones, and in every way to foster and protect them, and to extend commerce. By all which measures, says Anderson, "France soon became the great rival and supplanter of both England and Holland in most foreign markets—in Turkey, Spain, Portugal, and Italy, more particularly for woollen goods, with which, till after this time, the two first named nations alone supplied most of the countries of Europe."

Speaking of this period, Voltaire says, "It was wonderful to behold the seaports, which before were deserted and in ruins, now surrounded by works at once both their ornament and defence! Covered also with ships and mariners, and containing already near sixty large ships-of-war. New colonies, under the protection of the king's flag, were sent from all parts into America, East India, and Africa. A wonderful change this in six years' time! Moreover, every year of Colbert's ministry, from 1663 to this year, 1672, was distinguished by the establishment, of some new manufactory, such as fine woollen cloth, silk, and glass, with which, till this time, Venice had supplied all Europe. He also procured from England the secret of the stocking frame, of English invention, by which stockings are made ten times quicker than by the knitting needle. The manufacture of carpets, also, and of fine tapestries, were introduced; also, wrought iron ware, steel, fine earthen ware, morocco leather, &c."

In the year 1675, an inquiry was made by order of the British Parliament into the trade between France and England, and according to Echard, and Rapine, a return was made, by which it appeared—

The imports from France were	£1,500,000
The exports to France, annually, about	170,000
Annual balance against England,	£1,330,000

Thus is plainly to be seen, what we have before had occasion to notice, that commerce flourishes only upon a protected and thriving domestic industry. France had lagged behind all other European states in her commerce, until the measures to start her domestic industry were commenced in the reign of Henry IV. Indeed, such a thing as French commerce before that period was scarcely known. But in little more than half a century, under the wise counsels of Richelieu and Colbert, we find every species of manufacture carried on, and so much had these strengthened the kingdom, that Voltaire says, "France had, in 1681, sixty thousand sailors, and upwards of one hundred ships of the line, being a greater naval power than was possessed by England and Holland combined." Puffendorf also states, that at this time the French King's revenue was computed at one hundred and fifty millions of livres, whereas in Henry IV. time it did not amount to sixteen millions. The whole history of modern Europe establishes, beyond controversy, that the increase of the wealth and power of each nation has always depended upon its advance in manufactures—that as these have augmented and become consolidated, so has its commerce become extended, and its political power and influence been felt, and its independence been secured; while a decline in its home industry has ever been followed by a falling off in its commerce, its wealth, and its political importance.

But to return to our narrative. In 1698, the French first began a settlement at the mouth of the Mississippi, in the Spanish province of Florida. In the year 1700, a new Council of Commerce was established in France, consisting of the principal ministers of state and twelve of the principal merchants of the kingdom—viz: two from Paris, and ten from the cities of Rouen, Bordeaux, Lyons, Marseilles, Rochelle, Nantes, St. Malo, Lisle, Bayonne, and Dunkirk, each one member. This council to meet at least once in every week, for healing of all matters commercial, as well by land as by sea, at home and beyond sea—to receive proposals, schemes, &c., also, to encourage works, manufactures, &c. The said merchants to be elected annually by the magistrates of the said cities. From the very first erection of this famous new council or board of commerce, we date the almost surprising increase of the commerce, *woollen manufactures*, mercantile shipping, and foreign colonies of France.

The year 1716 was marked by the far-famed Mississippi scheme, got up by the notorious John Law, a Scotchman, the son of a goldsmith at Edinburgh. The ostensible object was the paying off of the public debt of France.

A history of this great speculation, which ended in the most disastrous failure and distressing consequences, not only to all who embarked in it, but to the whole French kingdom, would occupy too much space. Neither would it comport with our present object. It is, therefore, sufficient to say, that thousands of families were ruined, and that Law was obliged to fly the kingdom of France for the safety of his life, and died in obscurity.

About the year 1740, the commerce of the French West India Islands had grown up to very great importance; their exports in cocoa, cotton, ginger, rum, and coffee, had reached the amount of £250,000 sterling, an enormous amount for that period. They had also an extensive commerce to the East Indies about this time. Twelve ships are said to have arrived at L'Orient in one year, whose cargoes were advertised as follows:

Coffee, tea, drugs, &c., by the lb. weight, to the amount of 5,334,710 pounds weight.
387,820 pieces of calicoes and stuffs.
4,284 packets of walking canes.
500 " Malacca canes.
Fans, 5,000; with painted handkerchiefs, painted paper, mother of pearl card counters, varnish, china ware, &c., in considerable quantities.

And again, in 1740. In the month of August the sale of the French East India Company's merchandise at L'Orient amounted to twenty-two millions of livres, or about one million of pounds sterling, being a vast increase within a very few years. We have also an account, in 1743, of the following importations at Rochelle from Canada:

Beaver skins	127,080	Cat skins,	1,220
Bear skins,	16,512	Wolf skins,	1,267
Rackoon skins,	110,000	Wolverin,	92
Martin skins,	30,325	Grey fox and cat skins,	10,280
Otter and fisher skins,	12,428	Red fox,	451
Mink skins,	1,700		
Total skins,			311,365

In all worth about £120,000 sterling, according to the valuation of the Hudson Bay Company.

The Comptroller General Demarest's Memoir of the Finances of France, at the death of Louis XIV., gives the medium raised for the seven preceding years—

Per annum,	Livres,	219,028,000
In the year 1734, there was raised	"	259,968,000
In the year 1740, there was raised	"	204,881,000
In the year 1741, there was raised	"	243,503,000
The expenses of this year exceed this sum 20,000,000 Livres.		
In the year 1742, there was raised	"	305,924,000
In the year 1743, there was raised	"	232,000,000
	"	1,465,304,000

Land forces in France in May, 1743, viz:

Regular troops, horse, and dragoons,	37,164
Foot,	182,600
	219,764
Militia,	75,000
Invalids,	9,296
	304,060
The seamen, marines, &c., same year, men,	42,440

Anderson states the French fisheries in 1745, as follows:

	Ships.	Men.	Quintals.
At Cape Breton,	93	5,260	186,000
Gaspay,	6	360	18,000
Quadre,	6	360	18,000
Port en Basque,	6	360	18,000
Les Fods Isles,	3	180	9,000
St. Malo,	300	18,000	900,000
	414	24,520	1,149,000

The cargoes of these vessels are valued in sterling at £981,692 10s.

The inland trade of France, like that of all extensive, populous, and industrious countries, has at all times been far superiour to its foreign commerce. This results from the consumption of the products of its own fisheries, mines, agriculture, and manufactures, and their circulation from one province to the other. The foreign commerce of France, comprising its exports of French industry, has been very variable, owing to the wars in which she had for many years been engaged with England.

In 1784, she exported—

Cloth, amounting in value to	Livres,	15,530,900
Stuffs,	"	7,600,600
Plush,	"	4,425,100

The exportation of the two first articles in 1787, amounted to 14,242,400 livres, and 5,615,800 livres. The produce of the whole woollen manufacture in France was estimated in 1789, at one hundred and forty millions of livres annually.

In 1787, the exportation amounted in all to 542,604,000 livres, of which 311,472,000 livres were the raw produce of the soil, mines, and fisheries, and 321,132,000 the produce of her manufactures.

The imports into France upon an average of the years 1785, 1786, and 1787, were 611,008,200 livres. But Mr. Rowland, in his Report to the Convention of 1792, stated the average imports of France to amount to no more than 319 millions. In 1800, they amounted to 325,116,000 livres. Exports 271,564,000 livres; balance against France 53,552,000 livres. According to Neckar, the balance of commerce in 1784 was seventy millions of French livres in favour of France. He calculated the imports 230 millions. But from the state of French commerce in 1787, which Mr. Arnould appears to have analyzed with much care,

The importations amounted to	611,008,200	livres.
The exportations " "	540,604,000	"
Balance against France,	70,404,200	"

From an official report made by Rowland to the National Convention, in 1793, it appears that in the year 1792 there entered inwards into the ports of France 7,607 vessels, amounting in all to 639,235 tons, of which

1,823 vessel, in all	147,821 tons,	were French.
1,940 " "	145,012 "	" English.
3,844 " "	346,402 "	all other nations.

And in the same year there cleared outwards 8,618 vessels, amounting in all to 544,935 tons, of which

1,940 vessels, or	147,410 tons,	were French.
3,111 " "	90,662 "	" English.
3,567 " "	306,863 "	all other nations.

About this period, 1790, broke out the Revolution, which soon led to devastating results, amidst scenes the most bloody and revolting. Yet, notwithstanding all that France suffered, from intestine agony and distress, such as no nation ever before experienced—notwithstanding the immense armies constantly kept in the field—notwithstanding the frequently disastrous state of her finances—still her vast natural resources, and the steady adherence, through any and every trial, to the great system of watching and encouraging her home industry, thereby creating an immense internal trade, enabled France to bear up under every burthen; and in a very few years after the peace of 1815, we find her commerce greatly increasing, both in exports and imports.

In 1816, 1817, 1818, 1819, and 1820, France was making rapid advances in prosperity.

The French Minister of Finance, in 1821, to Louis XVIII., thus accounts for the prosperity of France and the flourishing state of her finances.

"The fabrication of every thing necessary for the consumption of the population being exclusively confined to the nation, France has been in a situation to extend her consumption, which has gone on increasing from year to year."

The following is an extract from the King's speech, in the year 1821. "If we take a view of our domestic state, what motives have we not to bless Providence. The sensible progress of industry, agriculture, and the arts, attests that of commerce: and very soon new channels *will*, by multiplying the means of communication and traffic, extend the general good to all parts of the Kingdom."

On the 29th of November, 1821, the Minister of France laid before the Deputies his annual Report, which, after stating the receipts of the Treasury for one year at 890,000,000 francs, and the expenditures at 889,500,000, thus sums up the prosperous state of the country:

"Such a result of the termination of calamities, which, in any other country, an age would scarcely be sufficient to efface, evinces among us resources triumphant over the most adverse situations. What other nation besides France, would be able, after what she has suffered even up to 1818, by wars and other unhappy circumstances, to present in three years the happy spectacle which she this day offers? Her political engagements punctually fulfilled; her territory free and tranquil; her commerce and industry increasing in activity; her treasury always full; all her capital in employment, whether to acquire, to construct, to repair, or to give an impulse to works of public utility."

Mr. Chaptal says, "Arguing from past experience I go further. Even at the present time, when the various species of industry are in a flourishing state; with regard to the price or quality of our productions, any duty which would open the door to the competition of foreign fabrics, would shake to their foundations all the establishments which exist in France. Our stores would in a few days be crowded with foreign merchandise—it would be sold at any price, in order to extinguish our industry. Our manufacturers would be devoted to idleness, through the impossibility of the proprietors making the same sacrifices as foreigners; and we should behold the same scenes as followed the Treaty of Commerce of 1786, although it was concluded upon the basis of fifteen per cent."

In 1816, the French tariff underwent a new revision and the list of prohibited articles was somewhat reduced—but that list still included three-fourths of the most important manufactures and productions with which France supplies itself.

We have already shown, in another place, that from 1793 to 1812, the commerce of the United States suffered very much from all the belligerents; and while we cannot omit in an account such as the present, the French, Berlin, and Milan, and the Rambouillet decrees, under which many of our vessels were condemned, nor the captures which took place prior to 1800; yet we state them simply as facts, connected with the commercial history of the period, and not as having any bearing upon the object we have in view in preparing this sketch, which is selected from many competent authorities to show a country situate with regard to England very much as is the United States—and to prove that by constantly adhering to the true policy of guarding and of protecting her own industry, France is now one of the richest and most prosperous countries on the globe.

In conclusion, we annex some tables of her exports and tonnage, which will speak for themselves, and show to what an extent she now carries her trade, on the proceeds of her varied wealth and industry, to all parts of the world.

McGregor, the last English writer, devoted to the so-called free trade system, thus speaks of France:

"Turning to France, we shall find that the commercial system of that country, from the time of Colbert to the present day, has been one of constant exclusion; with the single exception of the short term for which Mr. Pitt's treaty lasted, the legislation of England and France towards each other has been particularly anti-commercial, which has limited our trade with our nearest neighbours to an amount much smaller than the value of that with more distant customers, such as Germany, Italy, the United States, and Brazil."

Here is evidence, from a "free trade" source, to prove what we have endeavoured to set forth in this article; and we may add that France has adhered to the system of the most ample protection to every home interest, amidst the most strenuous efforts on the part of England, by every means in her power to induce France to relax and go into the system of free trade, as England is pleased to style it, but which France too well knows would break down her home industry, and lead to the most disastrous consequences.

France abounds with iron and minerals of almost every description. The principal copper mines are in the department of the Rhone, the Upper Pyrenees, and the Upper Alps.

She has but few lead mines that are worked, but most of them also yield silver. In the departments of the Ourte and Roer, antimony and manganese are found in great abundance.

Of metallic salts, she has green, white, and blue copperas, and verdigris at Montpellier, Epsom salt in the neighbourhood of Liege, and there and elsewhere marine salt, saltpetre, and sal ammoniac.

Of the mineral acids she has the most important; viz: sulphuric acid or oil of vitriol, nitric acid or aqua fortis, and the muriatic oxygenated acid, or aqua regia.

Of the combustible mineral she has pit coal in the greatest abundance, some anthracite in the Pyrenees and in the departments of the Rhone.

All sorts of earths and sands used in manufactures, as kaolin, or porcelain earth, of the finest and best qualities, quartz of all kinds, as well as every material of stony substance used in the arts, from the massy rock that forms the stately column, to the gem that sparkles on the neck of beauty.

She has manufactures, unrivalled.

Of linen cloth in Normandy, Picardy, Hainault, Cambresis, Bretagne, Maine, Dauphine, Auvergne, Beaujolais, Gascogne, and Anjou. Before the Revolution she exported linens to the amount of twelve to thirteen millions of livres.

Of lawns and cambrics, the exports of which once amounted to six millions of livres.

Of thread lace at Brussels, Malines, Valenciennes, Dieppe, and Le Puy.

Of sailcloth at Rennes, Angers, Agen, Marseilles, Mont de Marsan, &c.

Of cables, ropes, and cordage, at Brest, Rochefort, Toulon, Abbeville, Dunkirk, and Havre.

Of printed calicoes, shawls, &c., at Rouen, Troyes, Darnetal, near Rouen, Bouvais, Langres, Crevelt.

Of muslins, at Rouen, Nismes, Geneva, Beziers, and Rheims.

Of dimity and fustian, of a superiour quality, at Alençon, Lyons, Troyes, Brussels, and Toulouse.

Of fine woollen cloth, at Sedan, Abbeville, Louviers, Elbeuf, Rouen, Darnetal, Les Andelys, Vienne, and Montauban. Coarser cloths are made in abundance at Chateauroux, Issoudun, Aubigny, Romorautin, St. Aignan, Roybon, Crest, Saillans, Romano, Grenoble, Valence, Valogne, Amboise, Niort., Aix, &c. Woollen stuffs, camlets, serges, plush, &c., are also manufactured in great quantities.

Of silks, chiefly at Lyons, Tours, Nismes, Paris, and Marseilles. In 1789, the produce of the silk manufactures was rated at 125,000,000 of francs and it employed from twenty-eight to thirty thousand looms. The silkworms reared in France were estimated in 1810 to yield 15,000,000 lbs. of silk annually.

Large manufactures of hats are established at Lyons, Rouen, and Paris.

Watches are manufactured in large quantities, at Paris, Geneva, Carouges, and Cluse. The number of watches consumed annually in France before the Revolution, was estimated at 200,000.

Jewellery is made in such abundance that at Paris and Lyons only, 70,000 workmen were employed before the revolution.

Of China ware and mirrors, glass, &c., the manufacture is carried to the highest degree of perfection.

Carpets and tapestry, besides the celebrated manufacture at the Gobelins, in Paris, are made at La Savonnerie and Beauvais, very little inferiour in quality to the former.

The proceeds of the whole internal industry of France is estimated at 8,600,000,000 of francs, or $1,612,500,000.

With these things presented, we proceed now to give an exact account of our trade with France for the year ending June 30th, 1844, which is as follows, viz.:

STATISTICAL TABLES OF FRENCH COMMERCE.

IMPORTS FROM FRANCE INTO UNITED STATES.

MANUFACTURES.		
Sewing silk, and silk twist...		$296,334
Manufactures of silk, including pongees, gross de Naples, &c., &c.,		5,460,836
Cloths and cassimeres,		594,548
Merino shawls,		94,978
Blankets,		123,019
Worsted stuffs,		1,060,396
Hosiery, gloves, &c.,		11,596
Cotton goods, dyed,		1,134,916
White cotton goods,		91,617
Velvets, and moleskins,		130,563
Twist, yarn, and thread,		3,126
Hosiery, gloves, mits, and bindings,		51,348
Other cotton maunfactures,		155,878
Goods made of silk and worsted,		923,246
Goat and mohair camlets,		21,995
Silk floss, and manufactures of silk not specified,		459,323
Thread and cotton lace,		65,764
Gold and silver lace,		21,142
Linens, bleached, and others,		162,182
Other articles of linen,		5,612
Articles of hemp,		523
Ready-made clothing,		46,352
Other articles of wear,		349,198
Manufactures of iron and steel,		101,795
Manufactures of copper,		84,825
" of brass,		12,534
" of tin,		174
" of other metals,		726
" of saddlery,		647
" of leather,		37,874
" of wood,		39,138
Plate glass above 22 inches,		30,958
Silvered plate glass,		43,159
Leghorn and chip hats, &c.,		192,863
China and porcelain,		76,569
Earthen and stone ware,		2,101
Plated and gilt wares,		15,927
Hats, caps, and muffs,		14,447
Hair cloth		85
Brushes, of all kinds,		$55,569
Paper hangings,		26,697
Slates, of all kinds,		558
Black lead pencils,		111
Chronometers and clocks,		6,765
Watches and parts of watches,		309,618
Manufactures of gold and silver,		11,455
Jewellery, &c.,		75,632
Buttons, metal and others,		245
Manufactured corks,		59,137
Quills,		66
Manufactures of wood,		14
Silk shoes and slippers,		1,906
Silk hats and bonnets,		20,342
Sail duck,		117
Oil cloth furniture,		3,738
Madeira wine,	121	
Sherry,	59	
Champagne,	204,474	
Burgundy,	4,078	
Port wine,	1,083	
Claret and other wine,	294,576	
White wine,	53,763	
Wine of Spain,	222	
Mediterranean wine,	84	
Wine of Germany,	2,453	
All other wines,	154—	561,067
Brandy,		537,822
Distilled spirits not from grain,		30,357
Cordials,		22,136
Beer, ale, and porter,		1
Vinegar,		3,886
Molosses,		591
Olive oil, in casks,		902
Linseed oil,		85
All other oils,		530
Scrap iron,		112
Sole and upper leather,		103
Leather gloves,		563,881
Boots and shoes,		23,742
Tanned and dressed skins,		45,026
Tanned, not dressed,		85
Writing paper,		5,785
All other paper,		5,290

Books, French,	$443	
Books. English, and all other kinds,	43,567	
Salt,	1,491	
Pickled fish,	43	
Brass and copper ware,	20	
Fire and side arms,	5,245	
Chocolate,	229	
Refined sugar,	35	
Cheese,	4,854	
Cigars,	316	
Ochre, dry and in oil,	6,060	
Red and white lead,	45	
Cordage,	97	
Twine, and pack thread,	3,540	
Seines,	696	
Watch chrystals and spectacle glasses,	2,459	
Cut glass,	2,870	
Pressed, moulded, and plain glass,	1,059	
Plain or pressed glass,	881	
Cylinder glass,	1,501	
Plain tumblers,	534	
Crown glass,	463	
Polished plates,	2,306	
Apothecaries vials,	1,394	
Bottles, glass,	27,855	
Demijohns,	229	
Pins,	95	
Muskets and rifles,	30	
Bonnet wire,	344	
All other wire,	1,206	
Wood screws,	761	
Nails, cut and wrought,	427	
Chain cables,	100	
Anvils,	8	
Iron castings,	4,005	
All other castings,	23	
Hatters' sad irons,	26	
Indigo,	$4,536	
Flannels,	2,132	
Carpets,	560—	$14,414,121
RAW MATERIALS.		
Almonds,	38,449	
Prunes,	28,759	
Figs,	467	
Dates,	48	
Raisins,	81	
Nuts,	3,944	
Cloves and cinnamon,	15,475	
Camphor,	3,631	
Pearl barley,	12	
Bristles,	2,910	
Woad or pastel,	187	
Opium,	920	
Glue,	4	
Bleaching powder,	1	
Thibet, Angora, and goats' wool,	1,454	
Hemp,	21	
Rags,	622	
Wool under 7 cents,	17,783	
Wool above 7 cents,	5,655	
Raw silk,	15,979	
Cocoa,	108	
Crude brimstone,	12,145	
Brimstone, unwrought,	17,008	
Furs, undressed, on skin,	10,047	
Zinc, in plates,	34	
Quicksilver,	60	
Teas,	20	
Hatters' furs, and others,	240,440	
Potatoes,	5,585—	$421,849
		$14,836,030
Gold and silver,		694,833
		$15,530,863
Non-enumerated articles,		2,018,621
Total imports from France,		$17,549,484
Total exports,		$15,438,900
Balance against United States,		$2,110,584

EXPORTS TO FRANCE FROM UNITED STATES.

Spermaceti oil,	$122
Whale and fish oil,	2,636
Whalebone,	170,091
Spermaceti candles,	1,231
Staves and heading, boards, plank, and other timber,	106,999
Other lumber,	5,597
Masts and spars,	263
Oak bark, and other dye,	15,705
All manufactures of wood,	3,778
Tar, pitch, rosin, and turpentine,	23,770
Pot and pearl ashes,	356,852
Skins and furs,	7,504
Beef, hides, and horned cattle,	318,960
Pork, hams and bacon, lard, hogs,	331,177
Butter and cheese,	3,207
Horses,	250
Wheat,	1,467
Flour,	16,198
Indian corn,	388
Rye, oats, and other small grain,	601
Rice,	309,448
Cotton,	9,899,535
Tobacco,	1,156,568
Hops,	3,091
Wax,	49,046
Household furniture,	515
Coaches and carriages,	150
Manufactured tobacco and snuff,	2,558
Spirits of turpentine,	986
Lead,	212,693
Spirits from molasses,	8,364
Copper and brass, and copper manufactured,	6,379
Medical drugs,	2,531
Cotton piece goods,	500
Wearing apparel,	3,225
Books and maps,	1,364
Paints and varnish,	564
Pewter, manufactures of,	37
Articles not enumerated—	
Manufactures,	15,053
Other articles,	27,325
Domestic exports,	$13,066,712
Foreign exports,	2,372,188
Total exports,	$15,438,900

The following table of the whole Imports and Exports of France are taken from the official Statistics published by order of the French Government:

Years.	Imports.	Exports.	Years.	Imports.	Exports.
	Francs.	Francs.		Francs.	Francs.
1787,	551,051,100	410,124,200	1825,	533,622,392	667,294,114
1788,	517,073,800	465,761,000	1826,	564,728,610	560,508,769
1789,	576,589,000	440,975,000	1827,	565,804,228	602,401,276
1792,	929,020,000	802,546,000	1828,	607,677,321	609,922,632
1797,	353,158,000	211,124,000	1829,	616,353,397	607,818,646
1798,	298,248,000	253,117,000	1830,	638,338,433	572,664,064
1799,	253,068,000	300,241,842	1831,	512,825,551	618,169,911
1800,	323,034,394	271,575,604	1832,	652,878,341	696,282,138
1801,	415,229,177	304,719,000	1833,	693,275,752	766,316,312
1802,	465,375,793	324,810,304	1834,	720,194,336	714,705,038
1803,	429,899,653	346,698,297	1835,	760,726,696	834,422,218
1804,	440,608,578	380,401,994	1836,	905,575,359	961,284,756
1805,	491,905,749	375,465,904	1837,	807,800,000	758,100,000
1806,	476,934,023	455,675,244	1838,	937,100,000	955,900,000
1807,	393,202,498	376,215,709	1839,	947,000,000	1,003,300,000
1808,	320,118,895	331,330,832	1840,	1,052,300,000	1,010,900,000
1809,	288,495,200	332,312,200	1841,	1,121,400,000	1,065,400,000
1810,	339,140,300	365,647,200			

The Franc, or Livre, is equal to 18 3-4 cents, or 3-16ths of a dollar.

The Course of the Foreign Trade of France, and its amount with each Country, in each of the four years from 1832 to 1835:

IMPORTATIONS.

COUNTRIES.	1832.	1833.	1834.	1835.
	Francs.	Francs.	Francs.	Francs.
United States of America,	89,400,000	99,000,000	97,300,000	89,500,000
Belgium,	64,000,000	68,800,000	66,300,000	72,000,000
Sardinia,	72,800,000	68,600,000	75,100,000	59,000,000
England and British possess. in Europe,	44,000,000	39,700,000	53,500,000	61,300,000
Austria and Venetian Lombardy,	34,200,000	48,200,000	36,000,000	41,800,000
Germany,	22,400,000	28,400,000	33,100,000	57,500,000
Switzerland,	23,200,000	31,200,000	39,000,000	59,300,000
Spain and the Canaries,	27,200,000	43,800,000	28,700,000	38,700,000
Guadaloupe,	23,400,000	21,200,000	24,600,000	23,800,000
British India and New South Wales,	14,500,000	27,400,000	34,000,000	26,300,000
Russia,	34,700,000	23,100,000	17,800,000	21,300,000
Prussia,	23,300,000	20,500,000	19,700,000	23,000,000
Martinique,	16,400,000	14,800,000	17,100,000	16,200,000
Turkey and Greece,	20,800,000	18,000,000	15,700,000	20,200,000
Bourbon,	14,900,000	16,200,000	16,300,000	18,400,000
Two Sicilies,	21,000,000	15,100,000	18,100,000	13,200,000
Sweden, Norway, and Denmark,	13,700,000	16,100,000	16,200,000	16,700,000
Hanse Towns,	15,200,000	8,600,000	6,500,000	10,700,000
Tuscany and Roman States,	11,400,000	9,500,000	11,800,000	8,700,000
Brazil,	5,900,000	9,000,000	10,300,000	8,000,000
Algiers and Barbary States,	8,600,000	10,200,000	11,100,000	10,300,000
St. Pierre, Miquelon, and Fisheries,	7,300,000	7,700,000	7,700,000	7,100,000
Holland,	8,200,000	5,500,000	8,600,000	6,900,000
Cuba and Porto Rico,	3,400,000	6,700,000	8,000,000	7,500,000
Mexico,	7,900,000	5,300,000	6,700,000	7,000,000
Hayti,	3,500,000	3,500,000	5,100,000	5,900,000
Rio de la Plata,	4,600,000	4,700,000	5,900,000	5,400,000
Egypt,	3,900,000	4,900,000	4,100,000	3,600,000
China, Cochin-China, &c.,	600,000	3,600,000	6,200,000	2,000,000
Senegal,	2,600,000	2,100,000	2,400,000	3,000,000
Chili,	..	..	..	..
Peru,	..	..	..	..
Portugal and possessions of ditto.,	..	..	..	..
Other Countries,	10,000,000	11,600,000	17,100,000	16,700,000

The Course of the Foreign Trade of France, and its account with each Country, in each of the four years from 1832 *to* 1835.

EXPORTATIONS.

COUNTRIES.	1832.	1833.	1834.	1835.
	Francs.	Francs.	Francs.	Francs.
United States of America,..........	87,600,000	135,000,000	113,000,000	196,000,000
Belgium,.........................	50,000,000	52,300,000	44,200,000	43,800,000
Sardinia,.........................	51,000,000	49,700,000	49,100,000	44,000,000
England & British possess. in Europe,	101,800,000	116,200,000	93,800,000	100,000,000
Austria and Venetian Lombardy,....	7,400,000	6,700,000	5,200,000	6,800,000
Germany,......	49,600,000	42,000,000	45,300,000	36,000,000
Switzerland,.....................	55,900,000	58,200,000	65,000,000	73,500,000
Spain and the Canaries,....	40,100,000	62,500,000	49,000,000	82,100,000
Guadaloupe,......................	22,900,000	12,300,000	14,400,000	16,500,000
British India and New South Wales,..	4,800,000	5,200,000	4,900,000	4,600,000
Russia,...........	11,400,000	10,500,000	8,000,000	11,500,000
Prussia,.........................	10,700,000	[*]7,400,000	7,600,000	9,600,000
Martinique,......................	21,300,000	12,400,000	14,500,000	16,700,000
Turkey and Greece,...............	17,600,000	16,400,000	17,200,000	17,300,000
Bourbon,.........................	5,500,000	7,000,000	8,700,000	7,900,000
Two Sicilies,.....................	9,300,000	10,900,000	10,400,000	5,000,000
Sweden, Norway, and Denmark,....	5,400,000	5,700,000	5,000,000	5,100,000
Hanse Towns,.....................	16,700,000	18,000,000	14,400,000	16,100,000
Tuscany and Roman States,.........	12,400,000	11,700,000	12,100,000	9,400,000
Brazil,...............	9,400,000	18,200,000	21,200,000	22,700,000
Algiers and Barbary States,.........	16,800,000	24,300,000	17,900,000	14,400,000
St. Pierre, Miquelon, and Fisheries,.	3,400,000	4,800,000	4,900,600	5,000,000
Holland,.........................	25,200,000	16,000,000	20,400,000	19,300,000
Cuba and Porto Rico,..............	9,200,000	8,700,000	11,100,000	9,400,000
Mexico,..........................	13,400,000	15,000,000	12,000,000	17,300,000
Hayti,...........................	5,400,000	6,300,000	4,900,000	5,700,000
Rio de la Plata,..................	4,700,000	5,000,000	3,900,000	4,500,000
Egypt,...............	3,400,000	3,500,000	3,300,000	2,300,000
China, Cochin-China, &c.,.........	..	..	..	..
Senegal,.........................	2,500,000	3,800,000	5,300,000	4,600,000
Chili,...................	5,300,000	2,500,000	8,600,000	6,800,000
Peru,............................	4,800,000	4,300,000	2,900,000	1,300,000
Portugal and possessions of ditto.,....	1,300,000	2,000,000	4,000,000	7,000,000
Other Countries,..................	9,800,000	11,800,000	12,800,000	11,800,000

The object with which the two preceding tables are inserted, is to show how greatly, and still more how rapidly the foreign and colonial trade of France has gone on increasing during four years. The aggregate amount of imports and exports in 1824 was francs 895,403,500; and in 1836 it reached francs 1,866,860,100; being an increase in twelve years of 108 per cent., as we learn from French official documents.

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[*] *The following is an account of the Imports and Exports from France to England, showing the whole Trade between the two Countries in the respective years, as follows—viz: the amount being in pounds sterling:*

Years.	Imports from England.	Exports to England.	Years.	Imports from England.	Exports to England.
	£	£		£	£
1785,..............	722,057	344,370	1830,........... ...	667,349	2,317,686
1795,........	78,653	41,690	1835,...............	2,067,261	2,746,999
1805,..............	552	494,749	1836,...............	2,345,615	3,125,978
1815,..............	1,443,680	754,372	1837,...............	2,876,051	2,707,587
1820,..............	1,163,901	775,132	1838,...............	3,855,003	3,431,119
1825...............	1,171,615	1,835,985	1839,...............	3,632,653	4,022,526

[*] Waterston's Cyclopedia of Commerce.

* *Statement showing the amount of the Import and Export Trade of France with the different countries of the world in the year* 1838, *estimated in pounds sterling*.

	Imports.	Exports.
EUROPE.	£	£
Russia,	1,292,819	539,928
Sweden,	202,711	41,655
Norway,	440,339	88,570
Denmark,	33,144	78,556
Prussia,	838,762	361,594
Hanse Towns,	397,352	831,018
Mecklenburg Schwerin,	14,124	15,275
Holland,	837,359	877,014
Belgium,	3,723,856	2,206,461
Great Britain,	3,797,701	5,602,145
Portugal, Azores, &c.,	61,080	90,113
Spain,	1,418,592	3,033,093
Austria,	206,197	411,678
Sardinian States,	4,469,388	2,380,915
Two Sicilies,	899,033	541,782
Tuscany,	632,360	719,091
Roman States, Lucca,	38,373	107,897
Switzerland,	2,678,000	3,445,823
Germany,	2,180,175	1,794,017
Greece,	15,713	84,367
Turkey,	1,090,995	657,279
AFRICA.		
Egypt,	137,832	151,068
Algiers,	66,697	1,011,431
Barbary States,	240,137	210,566
Cape of Good Hope, Mauritius,	24,172	273,3[illegible]
Other Ports,	22,933	52,710
ASIA.		
East Indies, British, and Australia,	723,204	108,481
East Indies, Dutch,	249,194	57,355
Do. French,	212,344	17,361
ASIA.		
China,	48,149	11,512
Cochin-China,	53,751	33,252
AMERICA.		
United States,	5,311,827	6,827,921
Hayti,	290,413	202,131
British Possessions,	..	28,049
Spanish "	459,676	602,915
Danish "	35,981	151,616
Dutch "	8	826
Brazil,	379,425	918,295
Mexico,	176 603	324,261
Central America,	106,690	13,194
Venezuela,	51,361	70,396
New Granada,	19,784	17.419
Peru,	890	103.895
Bolivia,	..	14 376
Chili,	132,333	307,348
States of Rio,	255,319	201,113
French Colonies—		
Guadaloupe,	860,474	607,708
Martinique.	684,496	623,780
Bourbon,	844.924	549,835
Senegal,	212,455	472,224
Cayenne,	109,399	136,692
St. Pierre, Miquelon, and the Fisheries.	488,976	227,171
Wrecks and Salvage,	14,759	..
£	37,482,179	38,236,306
Specie,	6,907,087	2,288,936
£	44,389,266	40,525,242

* **Waterston's Cyclopedia of Commerce.**

The following table shows the amount of the Import and Export Trade of France in each year, from the beginning of the century to the close of 1836, *reduced to English money at the exchange of* 25 *francs to the pound sterling*:—

Years.	Imports.	Exports.
	£	£
1801,	16,609,167	12,177,240
1802,	18,597,986	12,973,046
1803,	17,195,986	13,835,118
1804,	17,616,681	15,181,252
1805,	19,676,230	14,985,375
1806,	19,073,481	18,198,434
1807,	15,728,104	15,022,963
1808,	12,804,756	13,232,196
1809,	11,469,964	13,273,824
1810,	13,466,536	14,601,340
1811,	11,942,464	13,116,232
1812,	8,319,480	16,745,848
1813,	10,043,420	14,170,292
1814,	9,558,236	13,842,116
1815,	7,936,648	15,908,174
1816,	10,462,766	18,528,842
1817,	13,592,010	15,791,494
1818.	14,276,558	17,968,261
1819,	12,368,931	16,619,177
1820,	14,525,575	18,196,727
1821,	15,777,694	16,190,583
1822,	17,047.168	15,406,748
1823,	14,473,129	15,630,177
1824,	18,194,464	17,621,676
1825,	21,314,896	26,691,764
1826,	22,589,144	22,420,340
1827,	22,632,169	24,096,071
1828,	24,307,172	24,396,905
1829,	24,654,136	24,312,746
1830,	25,683,537	22,906,562
1831,	20,513,022	24,726,796
1832,	26,114,898	27,851,285
1833,	27,731,030	30,652,652
1834,	28,807,773	28,588,201
1835,	30,429,067	33,376,545
1836,	36,223,014	38.451,390

The official returns of the French Government, relative to the shipping employed in the foreign and colonial trade of that country, do not embrace an earlier period than 1820: the following statement is, therefore, necessarily limited to the years from 1820 to 1836, inclusive; during which period the tonnage employed, distinguishing that under the national flag from foreign vessels, was as follows:—

Years.	INWARDS.						OUTWARDS.					
	French.		Foreign.		Total.		French.		Foreign.		Total.	
	Sps.	Tons.	Sps.	Tons.	Ships.	Tons.	Sps.	Tons.	Sps.	Tons.	Ships.	Tons.
1820,..........	3,730	335,942	4,337	354,556	8,067	690,498	3,753	308,063	5,866	408,673	9,619	716,736
1821,..........	3,493	316,243	4,310	367,092	7,803	683,335	3,552	290,483	5,722	353,965	9,274	644,448
1822,..........	3.282	285,560	4,456	423,041	7,738	708,604	3,493	284,517	5,861	357,719	9,354	642,236
1823,..........	2,559	229,129	4,016	423,162	6,575	652,291	3,316	222,744	6,159	398,290	9.476	621,034
1824,..........	3,387	316,480	4,184	438,065	7,571	754.485	3,955	325,608	6,338	415,241	10,293	740,939
1825,..........	3,387	329,735	4,218	414,670	7,605	744,405	3,908	354,307	5,994	400,440	9,902	754,747
1826,..........	3,440	355,776	4,910	544,682	8,305	900,458	3,569	355,745	5,308	432,672	8,877	788,417
1827,..........	3,350	353,102	4,439	475,509	7,889	828,611	3,522	346,370	6,321	439,842	8,843	786,212
1828,..........	3,465	346,591	4,728	527,639	8,193	874,230	3,341	326,835	5,063	460,519	8,404	787,354
1829,..........	3,048	331,049	5,070	581,755	8,118	912,804	3,101	316,462	4,490	420,228	7,591	736.690
1830,..........	3.236	340.171	5,169	669,283	8,405	1,609,454	2,679	258,621	4,139	370,518	6,818	629,139
1831,..........	3,375	333.216	3,951	461,194	7,326	794,410	3,671	326,253	4.240	362,981	7,911	689,234
1832,..........	4.290	399,948	5,651	714,638	9,941	1,114,586	4,045	347,385	4,636	461.704	8,681	809,089
1833,..........	3,561	358,157	5,115	622,735	8,676	980,892	3,675	318,840	4,580	464,028	8,255	782,868
1834,..........	3,965	394,486	6,124	736,918	10,089	1,131,404	4,221	370,217	5,083	518,216	9,304	888,433
1835,..........	4,001	407,999	6,360	766,033	10,361	1,174,032	4,292	387,139	5,194	484,807	9,486	871,946
1836,..........	5,173	550,121	7,099	689,345	12,272	1,439,466	5.189	485,611	6,200	570,436	11,389	1,056,047

ORIGIN OF COTTON PLANTING IN THE U. STATES,

WITH REMINISCENCES OF TENCH COXE, ESQ.

Among the many American worthies, who early saw the importance of establishing manufactures in the United States, Tench Coxe, Esq., of Philadelphia, was perhaps the most prominent. We therefore take great pleasure in recording such facts, connected with his advocacy of the home industry, as we are enabled to collect, not doubting they will prove highly interesting to those who, believing in the immense benefit derived to our agriculture and commerce from the present advanced state of our mechanical and manufacturing industry, must feel a lively interest in their first rise, and of consequence in the patriotic exertions of those who zealously and ably advocated their introduction.

Nor will it be uninteresting to know something of one, who, in his youth, as early as 1785, as he himself tells us, "felt pleasing convictions that the United States, in its extensive regions south of Anne Arundel and Talbot counties, Maryland, would certainly become a great cotton producing country." We find this his youthful foresight, recorded in "A Statement of the Arts and Manufactures of the United States for the year 1810, digested and prepared by Tench Coxe, Esq., in 1817." In this statement he proceeds to tell us that "An opportunity was taken after the Convention at Annapolis, in 1786, to examine into the opinions of persons of the highest qualifications, and the best opportunities to judge of the grounds of the suggested capacity for the cotton cultivation, and the connected prospects of those who might become extensive planters.

Mr. Madison was a member of the Convention, and on an examination of the subject of the capacity of the Southern country to grow cotton, was decidedly of opinion, that our success would be certain and great.

The opinions of the best judges, and of those of the most frequent opportunities of observation, were also decidedly favourable to the future success of the United States as a cotton-producing country.

In, and before, the year 1787, the United States had never exported one bale of cotton to any country; no planter had adopted its cultivation as a crop; nor had we any of those numerous and invaluable labour-saving machines, which have now reached such great perfection, to card, weave, spin, colour, and print, the proceeds of the cotton plant. Such was the real state of inadvertence on the part of the cultivators of the South, to the natural advantages of their soil and climate: such the unacquaintance of the ingenious and energetic mechanics of the whole Union, with the construction and value of labour-saving machinery.

Dr. Hewat, in his account of South Carolina, printed in 1719, gave as his decided opinion that the climate and soil of the province were favourable to the culture of cotton.

The first Provincial Congress in South Carolina, held in January, 1775, recommended to the inhabitants to raise cotton; but very little practical attention was paid to their recommendation. A small quantity only was raised for domestic purposes. In the cotton culture Georgia took the lead; it became then an article of export very soon after the peace of 1783. Their success recommended it to their neighbours. The whole quantity exported from Carolina in any one year, prior to 1794, was inconsiderable. In that year it amounted to £1,109,653 sterling.

It is admitted that the growing of cotton in the Southern States, was, if not an original idea, at least a very favourite theme with Tench Coxe, who always said and urged, that the manufacture of a redundant staple must be the foundation of our commerce.

Mr. Coxe was remarkably clear on this point, and was constantly urging the subject with the greatest force and energy. Wool had been claimed by England as her staple, and the woolsack adopted as the seat of the Lord Chancellor in the House of Lords, while America was destitute of a redundant staple. How clear-sighted were the views of Mr. Coxe, the present enormous growth of cotton in the United States fully testifies; and moreover, cotton has, in many cases, surpassed the use of wool in clothing, in blankets, &c.

Before a field of cotton was planted, and while we had nothing to manufacture into any quantity of clothing—nothing but the few household manufactures of wool—Tench Coxe saw, with the clear eye of a profound political economist, that the cotton plant would perform the double purpose of enriching the South, by its culture, and, at the same time, greatly advance the best interests of the whole country by its manufacture. It was his constant theme that North, South, East, and West, would be materially benefited in the unity of agriculture, manufactures, and commerce.

The following are some of his clear views, being part of an inquiry into the principles on which a commercial system for the United States of America should be founded; read before the Society for Political Inquiries, convened at the house of Benjamin Franklin, in Philadelphia, May 11th, 1787:

"A further encouragement to manufactures will result from improvements and discoveries in agriculture. There are many raw materials that could be produced in this country in abundance, which have hitherto been very limited. Cotton for many years before the Revolution was not worth more than nine pence sterling in the West India Islands. The perfection of the manufactories in Europe has raised it to such a pitch, that besides the prohibition against shipping it from the Colonies to any foreign port, the price has risen fifty per cent.

" The consumers in Pennsylvania have paid nearly two shillings sterling per lb. for the importation of this year. America cannot make a proper use of the national advantages of the country, or promote her agriculture and other interests, without manufactures—they cannot enjoy the attainable benefits of commerce and the fisheries without some general restrictions and prohibitions affecting foreign nations, so that in forming these restrictions and prohibitions, as well as in establishing manufactures, there is occasion for the greatest deliberation and wisdom, that nothing may be introduced which can interfere with the scale of our produce, or with the settlement and improvement of our new lands.

" Among the political considerations which must necessarily be admitted in treating of this subject, the force that may be required for our protection is not to be forgotten. It is certainly the greatest that attends it.

" America, we may presume, can have no inducements to engage in European wars. From our local situation, we may keep ourselves long disengaged from them. The principle European nations would find us an unprofitable and troublesome enemy. The trade of France, Great Britain, Spain, Holland, and Portugal, which passes by our coasts, is a security against their hostilities. A war among them, in which we should take no part, would be more beneficial to our farmers, merchants, and manufacturers, than all the advantage we could gain if engaged in it ourselves. Our ships would carry for them, instead of theirs, and our lands and manufactories would furnish the supplies for their fleets and islands in the West Indies. Another inducement to salutary regulations on the subject of manufactures will be suggested by considering some of our means of conducting them. Unless business of this kind be carried on, certain great natural powers of the country will remain inactive and useless. Our numerous mill-seats, for example, by which flour, oil, paper, snuff, gunpowder, iron work, woollen cloths, boards and scantling, and some other articles are prepared or perfected, would be given by Providence in vain. If properly improved, they will save us an immense expense, for the wages, provision, clothing, and lodging of the workmen, without diverting the people from their farms. Fire as well as water affords, if we may so speak, a fund of assistance that cannot be unused without an evident neglect of our best interests. It is probable, also, that a frequent use of steam engines will add greatly to the class of manufactures.

" The encouragement to agriculture afforded by manufactures, is a reason of solid weight in favour of carrying them on with industry and spirit."

These are but a very few of the clear and patriotic views of Mr. Coxe, put forth by him, when in council with Dr. Franklin, in 1787.

From this time forward, we never see or hear of any movement in favour of the introduction and promotion of manufactures, in which the name of Mr. Coxe is not most prominent.

In 1794, he published quite a large volume, octavo, entitled " A view of the United States of America, in a series of papers, written at various times between the years 1787 and 1794, by Tench Coxe, of Philadelphia, Commissioner of the Revenue, interspersed with authentic documents, the whole tending to exhibit the progress and present state of civil and religious liberty, population, agriculture, imports, exports, fisheries, navigation, ship building, manufactures, and general improvement. Philadelphia, printed 1794. London, reprinted for J. Johnson, in St. Paul's churchyard, 1795."

This book is accompanied by a prefatory note, addressed to the citizens of Pennsylvania, which shows such a very curious state of facts connected with the then commerce of the country, and more particularly as exhibiting the relative commerce of Philadelphia, New York, and New England, that we are inclined, as it is not long, to transfer it to our pages.

A PREFATORY NOTE, ADDRESSED TO THE CITIZENS OF PENNSYLVANIA.

After the following pages were delivered from the press, some observations upon those parts of their contents which relate to our particular State, occurred with very considerable force. These were accompanied by interesting reflections upon the existing circumstances of the country. It appeared useful to introduce them in a prefatory note, that they might encourage our perseverence in the ancient line of policy and conduct, which have produced effects so transcendently favourable to our local interests, without injustice to our sister States, or to the foreign world.

It appears by the return on the 476th page, that the State of Pennsylvania (or the city of Philadelphia) exported in the year ending in September, 1793, of foreign and domestic goods, nearly seven-eighths of the sum exported by New York, Connecticut, Rhode Island, Massachusetts, and New Hampshire; and that those exports of Philadelphia were $1,717,572 more than all the exports of New England. At the same time, it is well known that Baltimore received a considerable part of the produce of this State, and that some of it is usually sent out by land to the Patomac, and by water through the river Ohio. The migrators from New England, New York, New Jersey, Delaware, Maryland, Europe, and in that year from the West Indies, were consuming largely of articles which would otherwise have greatly increased the value of our exportations.

Having reference to the number of tons and to the quality, it will be found, that we built new vessels in the same year to an amount double that of any other port in the United States.

The increase of the exports of the United States in flour since the year 1786, has been about 800,000 barrels. This article is received by New England, the Carolinas, and Georgia, in a much greater degree from the Middle States, than it is exported from the former seven. This very great increase is therefore confined to Pennsylvania, New Jersey, New York, Delaware, Maryland, and Virginia; and it is not the principal staple of the last two states, which export more in value of tobacco than of flour. The difference in the value of the flour shipped from these six States in 1786, and that in 1793, is about six millions of dollars, calculating as well upon the increase of price as of quantity. The whole increase of the exports of the Union, since March, 1789, is about eight millions of dollars, of which more than two millions were in foreign goods.

Pennsylvania and Maryland, which exports considerably for Pennsylvania, shipped, of domestic and foreign goods, in 1792,	$6,370,904
The same two States shipped in 1793,	10,645,855

The difference in favour of the latter year was $4,274,951. This was about seventeen-twentieth parts of the increase of the exports of the United States in the same time.

The whole exports of New York, in 1793, were	$2,934,370
The mere *increase* of the exports of Pennsylvania, between 1792 and 1793, was	3,138,090
The exports of Pennsylvania, for the *half* year only, ending on the 30th March, 1794, were	3,533,597

The *increase* of the exports of the United States in 1793, beyond those of 1792, was about $5,000,000, of which the above increase of Pennsylvania alone, in that time, was thirty-one fiftieth parts, or more than three-fifths.

The population of Pennsylvania appears to have increased, in twenty-three years, nearly in the proportion of from thirty-nine to ninety-one; though the whole term of a revolutionary and invasive war of seven years was included. This considerably exceeds Dr. Franklin's estimate of doubling in twenty years. Now that all New England is full, except Maine and Vermont, the contiguous States of New Jersey and Delaware are overstocked, and Maryland nearly so; and above all, now that Europe is full and much disturbed, a curious rapidity of population is to be expected in a State with so much unimproved land, disposition and capacity for manufactures, wealth, foreign intercourse, energy, and enterprise, as Pennsylvania. The surplus population of New England, New Jersey, Delaware, and Maryland, at five per cent. is above 60,000 persons per annum; and the surplus of the old settlements of this State is above twenty-two thousand per annum.

The plenty of pit coal in Pennsylvania will very soon give it an immense advantage over all the interiour country north and east of it; in which, though colder than Pennsylvania, it is not known that there is one coal mine open, or that there is any considerable appearance of that invaluable fossil. Wood and timber are very much decreased in the principal part of New England, and in New Jersey, but are abundant in Maine and Vermont, and in many parts of New York.

It cannot be too much enforced and reiterated, that the interiour and western counties of Pennsylvania, and the western country in general, ought to procure, at any expense, the *most valuable* breeding animals which can be obtained—horses, mares, horned cattle, and sheep: because their distance from the seaports dictates the most intelligent and particular attention to the grazing husbandry. Horned cattle have been driven to Philadelphia from Massachusetts and North Carolina, and mules from Connecticut to Baltimore. The journey from the Ohio to Philadelphia is not more difficult.

The practice of the Eastern States in regard to schools deserves *the most serious attention* of the wise and good. It appears to have resulted in New England from their settling in townships of four, five, and six miles square. Perhaps it would be most easily accomplished in Pennsylvania by dividing the State into such townships. The utmost distance from a school, in the centre of a division of four miles square, would be very little more than a mile.

It is obviously of the greatest importance to this country, and to Pennsylvania, that its citizens should continue to be firmly attached to *the union* of the American States. An opposite disposition would be an error the most fatal, and the most extreme.

There was never applied to the improvement and advancement of Pennsylvania so great an aggregate of money, as is employed directly or indirectly at the present time. The improvements at the falls of Delaware, at Alexandria on the same river, opposite to Bucks, at Wilsonville on the Walenpaupack, at Asylum on the Susquehanna, at Connewaga by that company, at the Brandywine, Schuylkill, and Tolpehocken canals, at the Lancaster turnpike road, at the Black Friar Falls of Susquehanna, in the private buildings at Pittsburgh, the mills, work-shops, and dwelling-houses, in every town and every quarter of the State, together with the expenditures upon roads, bridges, and rivers, amount to a prodigious sum, and have attracted artists, mechanics, and labourers, from other States, and even from Europe, and have caught the stream of emigration ere it passed from east to west, and from north to south. It may be truly said, that the profits, not only of agriculture, but of trade, manufactures, funds, and banks, are turned, to a great amount, to the promotion of the landed interest by Pennsylvanians, by many other Americans, and by foreigners of several nations.

The imports of manufactures into the State of Pennsylvania are somewhat less than those of New York, though the exports of this State are so much greater. This is a clear proof of the magnitude of the manufactures of Pennsylvania. Gunpowder, linseed oil, glue, paper, books, engravings, carriages, braziery, copper ware, tin and pewter wares, iron castings, saddlery, hats, carriages for pleasure and work, paper hangings, pasteboard, boots, shoes, tanned and tawed leather, parchments, earthern and stone ware, cedar ware, corn fans, Windsor and rush bottom chairs, household manufactures of woollen, cotton, and linen, set work, gold work, silver plate, rolled and slit iron and steel, and manufactures thereof and of lead, leather breeches, whips, gloves, horsemen's caps, cartouch boxes, canteens, sword blades, bayonets, muskets, rifles, drums, boats, ships and vessels, beer, distilled spirits, and many other articles to a great amount indeed, are manufactured in the city of Philadelphia, in the boroughs, and in the counties of Pennsylvania; are transported, in many instances, by land and water, to several other States; and, in many instances, are exported to foreign countries. This is the real cause of a difference, which has attracted some observation; and this important circumstance is conceived to be one of the strongest points in favour of the resources, powers, and efficiency of Pennsylvania. From this solid truth it is obvious, that upon an accurate and comprehensive statement of her commerce, foreign and domestic, by sea and land, a great balance would appear in favour of this State.

The people of Pennsylvania owe very little money indeed to their American brethren; but, on the contrary, have always much due to them on all sides. They partake more largely in the ready-money branches of foreign commerce; because of their own valuable staples, and of the extent of their capital, and their habits of exporting to foreign countries, from the Southern ports, the productions of those States. In the credit trades they take a very large share, and are second to none in punctuality of payment.

The citizens of Philadelphia consume in their arts, trades, and families, and export to foreign countries so much of the produce of the fisheries, that they appear to have a strong interest to participate in them. While the British and French partake in the American fisheries, and in the whale fishery of every sea, it will continue to be a matter of certainty, that the enterprising ship owners and mariners of Philadelphia may at any time make the experiment.

The facts and ideas in this note, relative to the State of Pennsylvania, together with those in the 4th chapter of the first book, and in the 6th chapter of the second book, will tend to prove to us, who are of that prosperous State, its very deep interest in maintaining just government and public order."

To this we shall add, to close our reminiscences of this early and efficient friend of the home industry, an Address to an assembly of the friends of American manufactures, convened for the purpose of establishing a society for the encouragement of Manufactures and the Useful Arts, in the University of Pennsylvania, on Thursday, the 9th of August, 1787, and published at their request, by Tench Coxe, Esq., of Philadelphia:

Gentlemen: While I obey with sincere pleasure the commands of the respectable assembly whom I have now the honour to address, I feel the most trying emotions of anxiety and apprehension, in attempting to perform so difficult and serious a duty, as that prescribed to me at our last meeting. The importance and novelty of the subject, the injurious consequences of mistaken opinions on it, and your presence, necessarily excite feelings such as these. They are lessened, however, by the hope of some benefit to that part of my fellow-citizens who depend for comfort on our native manufactures; and by an ardent wish to promote every measure, that will give to our new-born States the strength of manhood. Supported by these considerations, and relying on the kind indulgence which is ever shown to well-meant endeavours, however unsuccessful, I shall venture to proceed.

Providence has bestowed upon the United States of America means of happiness, as great and numerous, as are enjoyed by any country in the world. A soil fruitful and diversified—a healthful climate—mighty rivers, and adjacent seas, abounding with fish—are the great advantages, for which we are indebted to a beneficent Creator. Agriculture, manufactures, and commerce, naturally arising from these sources, afford to our industrious citizens certain subsistence, and innumerable opportunities of acquiring wealth. *To arrange our affairs in salutary and well digested systems*, by which the fruits of industry, in every line, may be most easily attained, and the possession of property and the blessings of liberty may be completely secured—these are the important objects, that should engross our present attention. The interests of commerce, and the establishment of a just and effective government, are already committed to the care of THE AUGUST BODY* now sitting in our capital: the importance of agriculture has long since recommended it to the patronage of numerous associations, and the attention of all the Legislatures: but manufactures, at least in Pennsylvania, have had but few unconnected friends, till sound policy and public spirit gave a late, but auspicious birth to this society.

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* The Federal Convention.

The situation of America before the Revolution, was very unfavourable to the objects of this institution. The prohibition of most foreign raw materials—considerable bounties in England for carrying away the unwrought productions of this country to that, as well as on exporting British goods from their markets—the preference for those goods which habit carried much beyond what their excellence would justify—and many other circumstances—created artificial impediments, which appeared almost insuperable. Several branches, however, were carried on with great advantage. But as long as we remained in our colonial situation, our progress was very slow; and indeed the necessity of attention to manufactures was not so urgent, as it has become since our assuming an independent station. The employment of those, whom the decline of navigation* has deprived of their usual occupations, *the consumption of the increasing produce of our lands and fisheries*, and *the certainty of supplies in the time of war*, are very weighty reasons for establishing new manufactories now, which existed but in a small degree, or not at all, before the revolution. While we readily admit, that in taking measures to promote the object of this society, *nothing should be attempted, which may injure our agricultural interests*, they being undoubtedly the most important; we must observe, in justice to ourselves, that very many of our citizens, who are expert at manufactures and the useful arts, are entirely unacquainted with rural affairs, or unequal to the expenses of a new settlement; and† *many* we may believe, will come among us, invited to our shores *from foreign countries*, by the blessings of liberty, civil and religious. We may venture to assert, also, that more profit to the individual, and riches to the nation, will be derived from some manufactures, which promote agriculture, than from any species of cultivation‡ whatever. The truth of this remark, however, will be better determined when the subject shall be further considered.

Let us first endeavour, to disencumber manufactures of the objections that appear against them; the principal of which are, *the high rate of labour*, which involves the price of provision—*the want of a sufficient number of hands* on any terms—*the scarcity and dearness of raw materials*—*want of skill* in the business itself, and *its unfavourable effects on the health of the people.*

Manufactories, which can be carried on by watermills, windmills, fire, horses, and machines ingeniously contrived, are not burthened with any heavy expense of boarding, lodging, clothing, and paying workmen; and they supply the force of hands to a great extent, without taking our people from agriculture. By wind and water machines we can make pig and bar iron, nail rods, tire, sheet iron, sheet copper, sheet brass, anchors, meal of all kinds, gunpowder, writing, printing, and hanging paper, snuff, linseed oil, boards, plank and scantling,* and they assist us in finishing scythes, sickles, and woollen cloths. Strange as it may appear, they also card, spin, and even weave, it is said, by water, in the European manufactories. Bleaching and tanning† must not be omitted, while we are speaking of the usefulness of water.

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* A. D. 1787.

† This has been the great dependance, and the great means, in the business of handicraft manufactures in Pennsylvania.

‡ The manufacture of malt liquors, and of fruit and corn spirits, might be the means of preventing the importation of rum, brandy, gin, &c., which must amount to two millions of dollars per annum, taking in all our ports.

By fire we conduct our breweries, distilleries, salt and potash works, sugar houses, potteries, casting and steel furnaces, works for animal and vegetable oils and refining drugs.‡ Steam mills have not yet been adopted in America; but we shall probably see them after a short time in places where there are few mill seats, and in this and other great towns of the United States. The city of Philadelphia, by adopting the use of them, might make a great saving on all the grain brought hither by water, which is afterwards manufactured into meal; and they might be usefully applied to many other valuable purposes.

Horses give us, in some instances, a relief from the difficulties we are endeavouring to obviate. They grind the tanner's bark, and potter's clay; they work the brewer's and distiller's pumps; and might be applied, by an inventive mind, as the moving principle of many kinds of mills.§

Machines ingeniously constructed will give us immense assistance. The cotton and silk manufacturer in Europe are possessed of some, that are invaluable to them. Several instances have been ascertained, in which a few hundreds of women and children perform the work of thousands of carders, spinners, and winders. In short, combinations of machines with fire and water have already accomplished much more than was formerly expected from them by the most visionary enthusiast on the subject. Perhaps I may be too sanguine, but they appear to me fraught with immense advantages to us, and not a little dangerous to the manufacturing nations of Europe; for should they continue to use and improve them, as they have heretofore done, their people may be driven to us for want of employment; and if, on the other hand, they should return to manual labour, we may underwork them by these invaluable engines. We may certainly borrow some of their inventions,|| and others of the same nature we may strike out ourselves; for on the subject of mechanism, America may justly pride herself. Every combination of machinery may be expected from a country, A NATIVE SON of which, reaching this inestimable object as its highest point, has epitomized the motions of the spheres that roll throughout the universe.¶

The lovers of mankind, supported by experienced physicians, and the opinions of enlightened politicians, have objected to manufactures as unfavourable to the health of the people. Giving to this humane and important consideration its full weight, it furnishes an equal argument against

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* One mill of Ramsay's, the improvement on Barker's, near Philadelphia, grinds by water, chocolate, flour, snuff, hair-powder, and mustard, and shells chocolate nuts; it also presses and cuts tobacco for chewing and smoking, and bolts meal.

† The leather branch in Great Britain is estimated at eleven millions of pounds sterling, or more than a fifth of all their staple manufactures; and we eat more meat than they, and have the command of many more deer skins.

‡ The American improvements in steam have been brought forward since this publication.

§ We might cut stone and marble by horse and *water* mills. The latter is the mode in Italy.

|| 1790. We have since obtained the mill for spinning flax, hemp, and wool.

¶ David Rittenhouse, of Pennsylvania.

several other occupations, by which we obtain our comforts, and promote our agriculture. The painting business, for instance, reclaiming marshes, clearing swamps, the culture of rice and indigo, and some other employments, are even more fatal to those who are engaged in them. But this objection is urged principally against carding, spinning, and weaving, which *formerly* were entirely manual and sedentary occupations. Our plan, as we have already shown, is not to pursue those modes, unless in cases particularly circumstanced; for we are sensible that our people must not be diverted from their farms. *Horses, and the potent elements of fire and water, aided by the faculties of the human mind, are to be in many instances our daily labourers.*[*] After giving immediate relief to the industrious poor, these unhurtful means will be pursued, and will procrue us private wealth and national prosperity.

Emigration from Europe will also assist us. The blessings of civil and religious liberty in America, and the oppressions of most foreign governments, the want of employment at home, and the expectations of profit here, curiosity, domestic unhappiness, civil wars, and various other circumstances, will bring many manufacturers to this asylum for mankind. Our's will be their industry; and, what is of still more consequence, our's will be their skill. Interest and necessity, with such instructors, will teach us quickly. In the last century, the manufactures of France were next to none; they are now worth millions to her yearly. Those of England have been more improved within the last twelve years, than in the preceding fifty. At the peace of 1762, the useful arts and manufactures were scarcely known in America. How great has been their progress since, unaided, undirected, and discouraged. Countenanced by your patronage, and promoted by your assistance, what may they not be ere such another space of time shall elapse?

Wonderful as it must appear, the manufacturers of beer, that best of all our commodities, have lately been obliged to import malt from England. Here must be inexcusable neglect, or a strange blindness to our most obvious interests. The cultivation of barley should certainly be more attended to; and, if I mistake not exceedingly, the present abundant crop of wheat[†] will so fill our markets, that the farmer, who shall rear barley the ensuing year, will find it the most profitable of all the grains. We cannot, however, have any permanent difficulty on this article.[‡]

Of flax and hemp little need be said, but that we can increase them as we please, which we shall do according to the demand.

Wool must become much more abundant, as our country populates. Mutton is the best meat for cities, manufactories, seminaries of learning, and poor-houses, and should be given by rule as in England. The settlement of our new lands, remote from water carriage, must introduce much more pasturage and grazing than has been heretofore necessary; as sheep, horses, and horned cattle, will carry themselves to market through roads impassable by wagons. The foreign restrictions of our trade, will also tend to increase the number of sheep. Horses and horned cattle used to form a great part of the New England cargoes for the English West India Islands. These animals are exported to those places now in smaller numbers, as our vessels are excluded from their ports. The farms, capital, and men, which were formerly employed in raising them, will want a market for their usual quantity; and the nature of that country being unfit for grain, sheep must occupy a great proportion of their lands.

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[*] So far as we depend on our own resources.

[†] The price of flour had fallen in December, 1788, to 30*s*. per barrel. The French demand then took place, and raised it, on a medium, since, to 38*s*. and 40*s*. and often more.

[‡] The importation of malt has ceased, and the breweries are greatly increased. A. D. 1793.

Cotton thrives as well in the Southern States, as in any part of the world. The West India Islands and those States raised it formerly, when the price was not half what it has been for years past in Europe.* It is also worth double the money in America, which it sold for before the Revolution; all the European nations having prohibited the exportation of it from their respective colonies to any foreign country.† It is much to be desired, that the Southern planters would adopt the cultivation of an article, from which the best informed manufacturers calculate the greatest profits, and on which some established manufactories depend.

Silk has long been a profitable production of Georgia and other parts of the United States; and may be increased, it is presumed, as fast as the demand will rise. This is the strongest of all raw materials, and the great empire of China, though abounding with cotton, finds it the cheapest clothing for her people.‡

Iron we have in great abundance, and a sufficiency of lead and copper, were labour low enough to extract them from the bowels of the earth.

Madder has scarcely been attempted, but this, and many other dye-stuffs, may be cultivated to advantage, or found in America.

Under all the disadvantages, which have attended manufactures and the useful arts, it must afford the most comfortable reflection to every patriotic mind, to observe their progress in the United States, and particularly in Pennsylvania. For a long time after our forefathers sought an establishment in this place, then a dreary wilderness, every thing necessary for their simple wants, was the work of European hands. How great—how happy is the change! The list of articles we now make ourselves, if particularly enumerated, would fatigue the ear and waste your valuable time. Permit me, however, to mention them under their general heads: meal of all kinds, ships and boats, malt liquors, distilled spirits, pot-ash, gunpowder, cordage, loaf sugar, pasteboard, cards and paper of every kind, books in various languages, snuff, tobacco, starch, cannon, muskets, anchors, nails, and very many other articles of iron, bricks, tiles, potters' ware, millstones and other stone work, cabinet work, trunks and Windsor chairs, carriages and harness of all kinds, corn fans, ploughs, and many other implements of husbandry, saddlery and whips, shoes and boots, leather of various kinds, hosiery, hats and gloves, wearing apparel, coarse linens and woollens, and some cotton goods, linseed and fish oil, wares of gold, silver, tin, pewter, lead, brass, and copper, clocks and watches, wool and cotten cards, printing types, glass and stone ware, candles, soap, and several other valuable articles, with which the memory cannot furnish us at once.

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* A. D. 1787.

† There was a long and great mercantile speculation that had a great artificial effect. But this bubble being broken by the increase of cotton from their islands, and the importations from Surat, Bombay, &c., the price is now much reduced. It is supposed to be now in America about twenty-five per cent higher than in the five years preceding the Revolution war. We have imported cotton into America since this publication from Bombay and Mauritius.

‡ A. D. 1789. Forty-three chests of this article were imported from China in the last ships, and re-shipped to Europe advantageously. We have a large nursery of the white Italian mulberry established here this summer. Within ourselves little can be expected; but the idea of the nursery has been encouraged upon this principle, that it prepares things for an emigration from a silk country. This perhaps is refining, but the expense is small; the trees are wanted to replace those destroyed by the British army; and the measure falls in with our plan to *foster and encourage*, but *not to force* manufactures.

If the nations of Europe possess some great advantages over us in manufacturing for the rest of the world, it is however clear that there are some capital circumstances in our favour, when they meet us *in our own markets.* The expenses of importing raw materials, which in some instances they labour under, while we do not; the same charges in bringing their commodities hither; the duties we must lay on their goods for the purposes of revenue; the additional duties, which we may venture to impose, without risking the corruption of morals, or the loss of the revenue, by smuggling; the prompt payment our workmen receive; the long credits they give on their goods; the sale of our articles by the piece to the consumer, while they sell their's by great invoices to intermediate purchasers; the durable nature of some American manufactures, especially of linens; the injuries their's often sustain from their mode of bleaching; these things taken together will give us an advantage of twenty-five to fifty *per cent.* on many articles, and must work the total exclusion of several others.

Besides the difference in the qualities of American and European linens, arising from the mode of bleaching, there is a very considerable saving of expense from the same cause. So much and so powerful a sunshine saves a great loss of time, and expense of bleaching stuffs and preparations; and this will be sensibly felt in our manufactures of linen and cotton.

We must carefully examine the conduct of other countries, in order to possess ourselves of their methods of encouraging manufactures; and pursue such of them, as apply to our situation, so far as it may be in our power. Exempting raw materials, dyestuffs, and certain implements for manufacturing, from duty on importation, is a very proper measure. Premiums for useful inventions and improvements, whether foreign or American, for the best experiments in any unknown matter, and for the largest quantity of any raw material, must have an excellent effect. They would assist the efforts of industry, and hold out the noble incentive of honourable distinction to merit and genius. The State might with great convenience enable an enlightened society, established for the purpose, to offer liberal rewards in land for a number of objects of this nature. Our funds of that kind are considerable, and almost dormant. An unsettled tract of a thousand acres, as it may be paid for at this time, yields little money to the State. By offering these premiums for useful inventions to any citizen of the Union, or to any foreigner who would become a citizen, we might often acquire in the man a compensation for the land, independently of the merit which gave it to him. If he should be induced to settle among us with a family and property, it would be of more consequence to the State than all the purchase money.

It might answer an useful purpose, if a committee of this society should have it in charge, to visit every ship arriving with passengers from any foreign country, in order to inquire what persons they may have on board capable of constructing useful machines, qualified to carry on manufactures, or coming among us with a view to that kind of employment. It would be a great relief and encouragement to those friendless people in a land of strangers; and would fix many among us whom little difficulties might incline to return.*

Extreme poverty and idleness in the citizens of a free government, will ever produce vicious habits and disobedience to the laws, and must render the people fit instruments for the dangerous purposes of ambitious men. In this light the employment, in manufactures, of such of our poor as cannot find other honest means of subsistence, is of *the utmost consequence.* A man oppressed by extreme want is prepared for all evil, and the idler is ever prone to wickedness; while the habits of industry, filling the mind with honest thoughts, and requiring the time for better purposes, do not leave leisure for meditating or executing mischief.

An extravagant and wasteful use of foreign manufactures† has been too just a charge against the people of America, since the close of the war. They have been so cheap, so plenty, and so easily obtained on credit, that the consumption of them has been absolutely wanton. To such an excess has it been carried, that the importation of the finer kinds of coat, vest, and sleeve buttons, buckles, broaches, breast-pins, and other trinkets, into this port only, is supposed to have amounted in a single year to ten thousand pounds sterling, which cost wearers above $60,000. This lamentable evil has suggested to many enlightened minds a wish for sumptuary regulations; and even for an unchanging national dress, suitable to the climate, and the other circumstances of the country. A more general use of such manufactures as we can make ourselves would wean us from the folly, of which we have just now spoken; and would produce, in a less exceptionable way, some of the best effects of sumptuary laws. Our dresses, furniture, and carriages, would be fashionable, because they were American, and proper in our situation, not because they were foreign, showy, or expensive. Our farmers, to their great honour and advantage, have been long in the excellent economical practice of domestic manufactures for their own use, at least in many parts of the Union. It is chiefly in the towns, that this madness for foreign finery rages and destroys. There unfortunately the disorder is epidemical. It behoves us to consider our untimely passion for European luxuries as a malignant and alarming symptom, threatening convulsions and dissolution to the political body. Let us hasten then to apply the most effectual remedies, ere the disease becomes inveterate, lest unhappily we should find it incurable.

I cannot conclude this address, gentlemen, without taking notice of *the very favourable and prodigious effects upon the landed interest*, which may result from manufactures. The breweries of Philadelphia, in their present infant state, require forty thousand bushels of barley annually, and when the stock on hand of English beer shall be consumed, will call for a much larger quantity.‡ Could the use of malt liquors be more generally introduced, it would be, for many reasons, one of the most fortunate circumstances. Without insisting on the pernicious effects of distilled spirits, it is sufficient for our present purpose to observe, that a thousand hogsheads of rum and brandy,* mixed with water for common use, will make as much strong drink as will require one hundred and twenty thousand bushels of grain to make an equivalent quantity of beer; besides the horses, fuel, hops, and other articles of the country, which a brewery employs. The fruits of the earth, and the productions of nature in America, are also required by various other manufacturers, whom you will remember without enumeration. But it is not in their occupations only, that these valuable citizens demand our native commodities. They and their brethren, who work in foreign articles, with their wives, children, and servants, necessarily consume in food and raiment a prodigious quantity of our produce; and the buildings for the accommodation of their families and business, are principally drawn from our lands. Their effects upon agriculture are of more consequence than has ever been supposed by those who have not made the necessary estimates. So great are the benefits to the landed interest, which are derived from them, that I venture to assert, without apprehension of mistake, that the value of American productions annually applied to their various uses as above stated, without including the manufacturers of flour, lumber, and bar iron, is double the aggregate amount of all our exports in the most plentiful year, with which Providence has ever blessed this fruitful country. How valuable is this market for our increasing produce! How clearly does it evince the importance of our present plan! But we may venture to proceed a step further. Without manufactures the progress of agriculture would be arrested on the frontiers of Pennsylvania.† Though we have a country practicable for roads, some of our western counties are yet unable to support them, and too remote perhaps to use land carriage of the most easy kind. Providence has given them, in certain prospect, a passage by water; but the natural impediments, though very inconsiderable, and the more cruel obstructions arising from political circumstances, are yet to be removed. The inhabitants of the fertile tracts adjacent to the waters of the Ohio, Potomac, and Susquehanna, besides the cultivation of grain, must extend their views immediately to pasturage and grazing, and even to manufactures. Foreign trade will not soon take off the fruits of their labour *in their native State*. They must manufacture first for their own consumption; and when the advantages of their mighty waters shall be no longer suspended, they must become the greatest manufacturers of American raw materials for the use of the United States. Their resources in wood and water are very great, as are their mines of coal. As they do not sell much grain, but for home consumption, and must propagate sheep and cattle for the reasons above stated, their living will, in a short time, be the cheapest upon earth.

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* There are many societies in Philadelphia, New York, &c., for the patronage of emigrators from foreign countries.

† In this particular there has been a meritorious reform, amply compensating every good citizen for the exertions he may have made to promote manufactures.

‡ This presumption has been fully realized. We have besides, a very lively export trade in malt liquors; and if we had a sufficiency of black beer bottles, it must become very great.

How numerous and important then do the benefits appear, which may be expected from this salutary design! It will consume our native productions, now increasing to superabundance; it will improve our agriculture, and teach us to explore the fossil and vegetable kingdoms, into which few researches have heretofore been made; it will accelerate the improvement of our internal navigation, and bring into action the dormant powers of nature and the elements; it will lead us once more into the paths of public virtue, by restoring frugality and industry, those potent antidotes to the vices of mankind; and will give us real independence, by rescuing us from the tyranny of foreign fashions, and the destructive torrent of luxury.*

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* Worth about £20,000, and our imports of ardent spirits are estimated at ten times that sum in the port of Philadelphia only.

† Manufacturing establishments on the banks of Susquehanna are of the *utmost* consequence to our western and midland counties. It is supposed, that the manufacture of distilled spirits, in the country on the waters of the Ohio, around Pittsburgh, has occasioned a surplus to be sent down that river of one hundred thousand gallons.

Should these blessed consequences ensue, those severe restrictions of the European nations, which have already impelled us to visit the most distant regions of the eastern hemisphere, defeating the schemes of short-sighted politicians, will prove, through the wisdom and goodness of Providence, the means of our POLITICAL SALVATION.

SKETCH OF POLITICAL EVENTS IN BRAZIL,

FROM THE ARRIVAL OF THE ROYAL FAMILY TILL THE ABDICATION OF DON PEDRO.

The Treaty of Fontainbleau, which was to have enslaved Portugal, and thrown it, with its dependencies, into the arms of France, though for a long time it subjected the mother country to the military despotism of a foreign army, yet was the indirect cause of the independence of Brazil. The same wind which wafted to Lisbon the sound of an invading army, filled the sails of the Portuguese fleet which bore the heir of the House of Braganza from his European, to seek an asylum in his American dominions. The prayers offered up on the departure of the Royal family for their safe voyage, were responded to by fervent thanksgivings from Brazilian hearts on their arrival, and the new comers were welcomed with every demonstration of joy and satisfaction. Owing to the dispersion of the squadron, one part arrived at Rio while the other, which contained the person of the Regent, appeared off Bahia, at which place, though he remained but a short period, yet, he promulgated a decree, opening the ports of Brazil to the flags of all friendly nations. On the 7th of March, 1808, the Prince Regent arrived from Bahia, at Rio Janeiro, where he was received by the inhabitants with every demonstration of respect, joy, and loyalty. The enlightened views of Don John, still more liberalized by his recent misfortunes, laid the foundations for the cultivation of knowledge in various branches of science. He released it from the fetters by which it had hitherto been enthralled; and printing, which until his arrival had never been permitted to the colonists, was allowed to be freely exercised. The liberal changes introduced into their civil, political, and commercial codes, soon gave an impulse to the talents of the people, and the influence of the court operated to improve their manners and give a tone to their character. Rapid strides were made in commerce, and at the conclusion of the European war an extensive trade was carried on with most of the maritime states of Europe. To extend knowledge and promote commerce, was not the limit of Don John's liberality; for on the 16th of December, 1815, by patent from him, Brazil was elevated to an equal rank with Portugal, and formed part of the United Kingdoms of Portugal, Algarves, and Brazil. Before the rejoicings on this occasion had well died away, news arrived in Rio, of an insurrection having broken out in the northern provinces of Pernambuco, a district too remote from the capital to feel the influence of the Sovereign's presence. The instant advance of troops upon that province, from the surrounding country, showed that the insurrection was only partial, nor did it, indeed, extend much beyond the town. On the outskirts of Pernambuco the Royal and Republican armies met, when the latter were completely routed, and Don John's authority restored. After the death of the Queen, and the consequent accession of Don John to the throne of Portugal and Brazil, in 1818, he was invited by the Cortes to return to Portugal. This body being jealous of the influence of the Brazilians over him, were anxious to withdraw him from its operation, and perhaps, at the same time, a lurking hope still remained in their breasts that Brazil might again be reduced to a mere colonial possession. Yielding to their entreaties, Don John embarked for Europe the 24th of May, 1821, having created his eldest son Don Pedro, Prince Regent, with a council of three ministers, who swore fidelity and allegiance to the King. Hardly, however, had the Royal squadron left the shores of Brazil, when indications hostile to Portugal were manifested by individuals, and the Cortes, who either could not, or would not, understand the improvement in the Brazilian character, prepared to reduce the country once more to its former condition, commencing by ordering the Prince home. A more inauspicious moment for the reception of such a mandate could not possibly have existed; the country, ripe for asserting its independence, rejected their demands, and rose en masse. A policy, on the part of Portugal, more temporizing and liberal, would have been attended, perhaps, with contrary effects, and retarded the separation of the two countries. Don Pédro, who had sworn allegiance to his father, was, pursuant to the order of the Cortes, on the eve of leaving Brazil, when the whole population of the southern provinces entreated him to stay. The *press*, that powerful controller of parties, spoke boldly to the people, and in strong language descanted on the impolitic and illegal measures of Portugal. The sentiments of the country, at that period, may be gathered from the following extract of the address from the inhabitants of St. Paul's, 24th December. Speaking of the designs of the Cortes, it thus proceeds: "They aim at no less than disuniting us, weakening us, leaving us like miserable orphans, tearing from the bosom of the great family of Brazil the only common father who remained to us, after they had deprived Brazil of the beneficent founder of the kingdom, your Royal Highness' august Sire.

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* There is one *peculiar* mean of advancement in the United States, of the most striking and serious importance, as it regards manufactures. Being an unimproved country, we have the inestimable advantage of importing skilful cultivators of raw materials and *manufactures* from nations, which are more advanced than we are, together with their capital and their skill. We can have no doubt of the fulfilling of this expectation, for every town and county of the Middle and Southern States, and many of those in the Eastern States, abound with proofs, that the hope has been already realized in numerous instances. But were these proofs wanting, there could be no doubt, that strangers of every description will resort to a country so fit for their reception, so pregnant with the means of human happiness.

They deceive themselves, we trust in God, who is the avenger of injustice. How dare those deputies of Portugal, without waiting for those of Brazil, legislate concerning the most sacred interest of each province and of the entire kingdom? Must Brazilians now again, after being for twelve years accustomed to judgement at hand, go and suffer, like petty colonists, the delays and chicanery of the tribunals at Lisbon, across two thousand leagues of ocean, where the sighs of the oppressed lose all life and all hope? Yes, august Sire! your Royal Highness must remain in Brazil, whatever may be the projects of the Constitutional Cortes, not only for the general good, but even for the sake of the future prosperity and independence of Portugal itself."

The parts which more strongly mark the sentiments of the Brazilians, as well as show the pivot on which those sentiments worked, are those only I have introduced in the above extract; the original address would fill several pages. In these sentiments all Brazil joined; whilst amongst all classes of the community minor shades of party feeling were merged in the common interest for the public good. Acted upon by these representations, is it cause of wonder that the Prince Royal of Portugal gave way to them, and is there not found in the unanimous and powerful wishes of the Brazilians, some cogent apologies for Don Pedro's conduct towards his sovereign on this occasion—some powerful extenuation of the treason with which he has been branded? On the 10th of January, the Chambers met at Rio, when the unanimity in favour of Don Pedro's remaining was very conspicuous. After a short debate, all the members proceeded to the Prince, entreating him to remain in Brazil. The request was graciously received, and the invitation meeting with sympathy in his own bosom, he at once decided to accede to the general wish, and replied, "that, as it appeared to be the desire of all, he consented to remain." This determination diffused the most general joy, and the greatest enthusiasm was manifested towards himself and the Princess. He was everywhere received with popular acclamations, and addresses of adhesion and satisfaction poured in from all quarters.

In the mean time the Portuguese troops, who formed a great part of the Brazilian army, took up a strong position on the Castle Hill, but were immediately surrounded by several thousand native troops. Fearful, then, of being starved into unfavourable terms of capitulation, they surrendered, upon the agreement that they were to be immediately re-embarked for Europe; and they were at once sent off to the other side of the Bay, until transports were procured for their embarkation. When these were ready, the Portuguese troops, still indulging a hope of receiving fresh reinforcements from the mother country, refused to embark; but Don Pedro, then first actively espousing the popular cause, appeared off Praia Grande in a vessel of war, and threatened to bombard their position unless they instantly complied with the terms of the capitulation. This menace had its effect, and the troops finally embarked, amidst the execrations of the people. So great a change in political circumstances was not to be effected without differences of opinion. Partial revolutions arose in many places, but were quickly quelled by the stronger party. In the fine and fruitful province of Minas Geraes, the commotion was more serious, but Don Pedro, with a few attendants, at once proceeded to the scene of discontent, and by his courage and amenity gained the wavering, and confirmed the well disposed to his adherence. The most serious part of the revolution was identified with Bahia; but the Brazilian fleet, under Lord Cochrane, (already famous for his achievements on the west coast,) assisted by the inhabitants, after a long and arduous struggle, established the authority of Don Pedro. His Lordship having succeeded in driving the Portuguese from this part of the coast, and after having captured at least one half of their fleet, turned his arms against the provinces of Maranham and Para, where the same success attended him; and finally the remnant of the Brazilian fleet left the shores of Brazil in 1823. Meantime the Prince was invited, on the 13th of May, 1822, to accept the title of Constitutional Prince Regent and Perpetual Defender of Brazil, and on the 12th of December in the same year, was proclaimed, in the Campo de Santa Anna, the "Constitutional Emperor, Don Pedro the First."

In consequence of these changes, fresh elections for deputies took place throughout the provinces, who met, for the first time since the Revolution, at Rio, on the 17th April, 1823. A throne being prepared in the House of Assembly, the Emperor was conducted to it, from which he read a very clear and elaborate speech, of which the following are a few extracts. After recapitulating the decrees of Portugal, and the consequent resolution Brazil had taken to assert her independence, and having noticed the numerous petitions he had received soliciting him to remain, he proceeded: "It appeared to me that Brazil would be ruined if I did not attend to the petitions, and I did attend to them. I know that this was my duty, though at the risk of my life." In consequence of the low state of the finances, he remarked: "Therefore, I resolved to live as a private individual, receiving only 110,000 milreas for the whole expense of my household." Alluding to the common state of the army and navy, the speech proceeded: "It had neither arms, men, nor discipline: with regard to arms, it is now perfectly ready; the men are increasing daily, in proportion to the population, and it will soon be perfect, being already in obedience, exemplary. The navy has hitherto only consisted of the Puariga frigate, the Liberal corvette, and a few small vessels. Now we have one ship of the line, three frigates, and three brigs, besides various smaller vessels. I expect six frigates, manned and armed, for the purchase of which I have already given orders. We have greatly increased the national topography, the public gardens have been put in order, the museum repaired, and enriched with minerals and with a gallery of pictures, (some of which were my private property,) which I have ordered to be placed there. In order to augment the public library, I have bought a large collection of choice books. I have augmented the number of schools, and increased the salaries of some of the masters, besides licensing innumerable private schools; and, aware of the benefits of mutual instruction, I have opened a Lancasterian school."

For a time all party spirit seemed to subside and settle down with unanimity, from a general desire to elevate Brazil to the rank to which her natural powers and productions entitled her. The first symptoms of a termination to this tranquillity were shown in the desire of a numerous party to dismiss the Andrades from the ministry—men who had been the most patriotic of the Brazilians throughout the late revolution, and who possessed great influence over the Emperor's mind. Their dismissal was loudly called for by the Republican party, who inveighed bitterly against the elder Andrade for having used vigorous measures against some parties who had expressed their particular political sentiments too freely.

At first some difficulty was experienced in filling their places, but this was at length overcome by a proclamation issued by Don Pedro, in which he expressed an entire wish to be solely guided by public opinion. But at length a more serious difference sprung up between the Portuguese and Brazilian party, for whatever watchwords of faction they might have adopted, these were their real interests. Two European officers, taking offence at an attack on the horse artillery by one of the journals, proceeded to the house of the supposed editor, whom they severely maltreated; this occasioned a great sensation, and created a strong prejudice against all public men (Portuguese) who had been appointed by the Emperor. This jealousy was still further increased by the Emperor dissolving by armed force the Chambers, and created a breach between him and his people. But the apprehension, about this time, of an attack from Portugal, arrested any immediate evil consequences, by uniting all classes against the common enemy.

This tranquillity was further strengthened by the recognition of Brazil, by the mother country, through the intervention of Great Britain, in August, 1825, under the terms that Brazil was recognised as a sovereign state, reserving to Don John VI. the title of Emperor of Brazil during his lifetime, with succession to Don Pedro for the consideration of two millions sterling. The death of Don John, on the 10th March, 1826, left Don Pedro heir to the thrones of Portugal and Brazil, the former of which he immediately formally abdicated, in favour of his eldest daughter, Donna Maria, as Queen of Portugal. This step eventually had a tendency to interest the Emperor more in Portuguese affairs than the Brazilians desired.

In connexion with this sketch, we must briefly refer to the Buenos Ayrean war, which tended materially to drain the treasures and weaken the resources of the infant monarchy. The Banda Oriental, in which Monte Video is situated, was at this time in possession of Brazilian troops, who, though originally called in to assist the Spaniards, yet availed themselves of the political distractions, to hold the country for their own sovereign. The Monte Videans revolted at this assumption, and placed themselves under the protection of the Republic of Buenos Ayres, who immediately marched troops to their assistance. The war was thus commenced, and among its evil effects to Brazil was the introduction into the country of some German and Irish regiments. These men were induced to enter into the Imperial service from the liberal promises held out to them, but which not being fulfilled, disorders broke out, and disturbances, more frightful than even those they were hired to quell. Goaded by a series of hardships, deprived of pay, of clothing, and the necessaries of life, they revolted, and it was only after much exertion, and several lives lost, that the revolt was put down; the Irish were sent home, and the Germans, with the exception of small parties who went to the mining districts, marched off to the south. The Brazilian Government, after these events, finding a great difficulty in supplying troops for the war, agreed to acknowledge the independence of the Banda Oriental, and under the guarantee of Great Britain, a treaty was drawn up to that effect, and subsequently both parties evacuated the disputed territory, leaving, however, Brazil burthened with heavy claims from the French, American, and English governments, arising from several illegal detentions and captures during the war.

From this period until the meeting of the Chambers in 1830, no particular event occurred, with the exception of an insurrection at Pernambuco, which was speedily put down. When the Chambers were assembled, their attention was called to the state of the finances, the formation of a national bank, and the necessity of imposing legal restraints upon the press. How far they met the views of the Emperor on these points, will appear from the following extract of his speech at the close of the session: "I much regret having to intimate to the Chambers, that the time fixed for the close of the session should have arrived, without any of those measures having been effected which the Constitution of the Empire requires, which I had recommended, and which the whole Empire hoped from the patriotism of its representatives." Such a division of sentiment between the executive and the representatives of the people diminished the popularity of the Emperor and his government, and this bad feeling was further provoked at the meeting of the Chambers, in 1831. A committee was appointed to investigate the conduct of the Minister of War, in having ordered from London, while the nation was enjoying profound peace, a large quantity of arms; and in consequence, articles of impeachment were drawn up against him. The depreciated state of the currency, arising from an excessive over issue of copper, alarmed all classes, from its paralyzing influence on trade, and also tended to bring the government into disrepute. In this state of things, the Upper and Lower Houses differed as to certain alterations made by the former in the bill for fixing the income and expenditure of the current year, and to which the Deputies, or Lower House, would not accede. On this question, as the Senate was considered more immediately under the influence of the government, the dispute became, as it were, a contest between the government and the people, who, eventually demanding the fusion of the Chambers, as fixed by the Constitution, gained their point. The people grew every day more dissatisfied with the conduct of affairs; the preference shown to the Portuguese party, and the lavish expenditure of the public money on the court of the young Queen, established by Don Pedro at Rio, and on the Regency at Terceira, rendered it evident, to all thinking and observant individuals, that a crisis was at hand.

In the month of November, 1830, the Emperor left Rio with the Empress, on a tour through the Minas Geraes, and during his progress was everywhere received with marked attention. Mixed, however, with the enthusiasm displayed, there was manifested a feeling that he was welcomed as the Constitutional Emperor, and not merely as a royal personage. Judging from these symptoms that there lurked a spirit of disaffection to his government, he was ill-advised by Senor Maia, the Minister of State, who accompanied him, to issue a proclamation to the Miners; in which he disclaimed against the republican spirit existing, and told them, that although they might wish to model their conduct by that of France, Brazil was not the fit theatre for such displays. This proclamation, from its results, may be considered as having given the finishing stab to his fortunes; from that moment he distinctly recognised the party of the Federalists, and ranged himself on the side of that party that was hated and suspected. The existing ministry were Portuguese; the supposed author of the proclamation was a Portuguese; and the issued manifesto was looked upon as an endeavour to feel the character and temperament of the Brazilians with reference, perhaps, to future attempts on their nationality. The Emperor returned to Rio on the 12th March, and on the 13th, 14th, and 15th, the streets were illuminated in honour of his arrival, and both parties displayed their feelings on this occasion. The Portuguese party illuminated their houses, but the Brazilians declined paying this compliment, except where they were compelled. The Rua dos Ourives, which divides the town into nearly equal parts, was the line of demarcation between the contending parties, the lower part of the town being principally the residence of Portuguese shop-keepers. During the night of the 13th, a band of young Brazilians met, at the corner of this street and the Rua dos Violas, a large body of the opposite party armed with broken bottles, sticks, and fire-arms; both parties being highly excited, a severe contest arose, when, from the disparity of numbers, and want of weapons, the Brazilians were much worsted and severely wounded.

This circumstance, joined to the passiveness of the police, who were idle spectators of the outrage, increased the bitterness and animosity between the two parties to such a degree that, from that hour, an organization of feeling was manifested against the very name of Portuguese. The press re-echoed the clamour, and called upon all who professed themselves free Brazilians to make a vigorous effort to emancipate themselves from Portuguese ascendancy. "The Aurora," a popular paper, very ably conducted by Senor Evaristo Ferriera de Veiga, a member of the Chamber of Deputies, took the lead in opposition to the government, and was vehement in denouncing the Portuguese influence. In conjunction with a numerous body of Deputies, he drew up a memorial to the Emperor, representing to him the late disorders committed in the capital, and calling upon him to take vigorous measures to repress any such future ebullitions. To this memorial the Emperor returned an answer, declaratory of his constitutional sentiments, and of his determination to put down factions opposed to Brazil; and further, as a concession to the popular feeling, a change of ministry, more in accordance with the public wishes, took place. This measure appeared to give general satisfaction; but from the intrigues in the palace, joined to the Emperor's hostile views towards some of them, this ministry was broken up on the 5th April, and a part of the old ministry, joined to others of the Portuguese party, succeeded them. The public anxieties were now removed, and the troops and people met in the Campo de Santa Anna to determine on the measures to be adopted. At two in the afternoon of the 6th, a deputation of the Juriis de Pac waited on the Emperor, at his palace at San Cristovoao, beseeching him to dismiss his obnoxious servants; but he firmly refused, asserting that the Constitution gave him the right of appointing his ministry, and that, while sovereign, he would not be the tool of a faction—closing his address in these words, alluding to their judicial character: "With one hand I will uphold the Constitution, and with the other the sword of justice." He then dictated a proclamation to the troops and the people assembled in the Campo, but which, on receiving, they tore up with every mark of contempt. At midnight Don Pedro wished to proceed to the Campo, but found, with the exception of a faithful few, that his guard of honour and the troops of the palace had deserted him. His situation now having become extremely critical, at two o'clock in the morning he wrote out his abdication, in the following form:

"In exercise of the right which the Constitution allows me, I declare that I have voluntarily abdicated in favour of my much beloved and dear son Don Pedro d'Alcantara."

(Signed) "PEDRO."

Boa Vista, 7th April, 1831,
10th of the Independence of the Empire.

As soon as the Emperor had signed the abdication, he despatched a courier to H. B. Majesty's charge d'affaires, Mr. Aston, stating what had occurred, and requesting the protection of the British flag. Mr. Aston instantly waited on Don Pedro, and found the inmates of the palace in the greatest distress and anxiety. The wife of Don Pedro was kneeling before him, beseeching him to annul his abdication, but the Emperor told her that "it was impossible." Every thing being arranged for his departure, he addressed the few guards who had remained faithful to him, and said, "Gentlemen, I am no longer Emperor; I thank you for your fidelity—farewell." He then kissed his children for the last time, and taking the Empress' hand, led her to the place of embarkation; and it was only on stepping into the barge that his feelings appeared to overcome him; casting a look on the walls of his palace, he exclaimed in a broken voice "San Cristaof!" appearing to be buried in the bitterest anguish. In a few minutes the barge pulled alongside H. M. ship Warspite, where the Admiral, Sir Thomas Baker, and the corps diplomatique were waiting to receive him.

It may readily be presumed that the revolution at that moment engrossed every body's attention. Nothing certain was known, except that the Emperor had abdicated in favour of his son and was on board the Warspite. He was to sail on Tuesday morning in H. M. ship Volage, for a port in Europe, accompanied by the Empress and suite. The reaction had come upon us very suddenly. On the 25th ultimo, he attended a review of the troops, and was received with the customary marks of affection and respect. After this, he assisted at a fête in the chapel of Francisco de Paula, where the vivas were most enthusiastic. One individual called out, "Long live the Emperor!" and another replied, "As long as he is a Constitutionalist!" The Emperor immediately replied, in a loud voice, "I always was and always shall be attached to the Constitution!". In spite of these good omens, the bad feeling between the two parties broke out on the nights of the illuminations in honour of his Majesty's return, and some fighting took place, as I have before stated. Every shop was now shut up, and few persons to be seen in the streets. Anxious to see what was going forward, I proceeded with two friends to the Campo d'Acclama cao, where the troops and people were encamped. The appearance of things in the Campo was singular enough. Imagine some 8,000 or 10,000 people, of all hues and complexions, each armed to his fancy, and indiscriminately dressed, from full regimentals to the commonest rags, deciding the fate of an empire—groups of anxious people standing by the guns, tents pitched, and officers riding to and fro, giving the necessary orders. In another spot we observed some eloquent patriots haranguing the multitude, and distributing papers—of course filled with fulsome eulogiums on their own courage, virtues, and patriotism, and teeming with execrations on the Portuguese and the Imperial party.

H. M. ship Volage, Capt. Rt. Hon. Lord Colchester, got away on the morning of the 13th April, 1831, with the Emperor, Empress, and suite, and things became more quiet. Don Pedro conducted himself on board with the most perfect calmness and magnanimity, and did not appear in the least to regret his altered fortunes. Count Revenblou, the Danish minister, told me this morning that the Emperor addressed the corps diplomatique somewhat as follows:

"Gentlemen, I have upwards of two years seen that certain classes of Brazilians were hostile to my person and sentiments," (appealing to the Marquez of Cantagallo, who was standing near him,) he said, "I have long looked forward to a change of condition. I have done all I could for the good of Brazil, and feel so much hurt and disgusted with the conduct of certain Brazilians, that if they were capable, and willing to build me a bridge of diamonds, I would not for its value place my foot again on the shores of Brazil."

His bonhomie and cheerfulness were remarkable. On one occasion, at dinner, on board the Warspite, Don Pedro stood up, and said in French, "I give you the health of my son and sovereign, Don Pedro the Second."

Immediately on Don Pedro taking refuge on board the Warspite, the representatives of the nation met, and appointed a Provisional Regency, to govern in the name of Don Pedro II., until the time determined by the Constitution for opening the Legislative Assembly. The foreign ambassadors, headed by the Archbishop of Treviso, the Pope's Nuncio, apprehensive of disturbances, and principally with a view to protect neutral Portuguese, jointly addressed from the Warspite an official note to the Provisional Government, demanding protection for the subjects of all nations. On the 9th April, the young Emperor was conducted to the Imperial chapel, where a solemn te deum was performed, as an act of congratulation on recent events. The late Emperor, previously to his departure for Europe, bequeathed the education of his children to Jose Bonefacio Audrade, a very honourable Brazilian, of the Liberal party, who had been instrumental in putting the crown on the head of Don Pedro. Don Pedro, on leaving, addressed a farewell to the Brazilian nation, in language extremely touching. He says, "I retire to Europe, regretting my country, my children, and my friends. To leave objects so dear, is touching to the hardest heart; but leaving them to sustain their honour, is thus the greatest glory. I ask pardon of all I have offended, and I thank all who have shown me kindness. Farewell country—farewell friends—farewell for ever!"

Early in May the Senate met, when General Lima, Brantio Monir, and Costa Carvalho were chosen Regents until the young Emperor should attain the age fixed by the Constitution. This young prince is the son of Maria Leopoldina, the daughter of the late Emperor of Austria, and sister to Maria Louisa, late Empress of France, and is in his tenth year. His mother died in Brazil some years back, leaving this one son and four daughters; the eldest is now Queen of Portugal; one is since dead, and the others are educating in Brazil.

We have thus brought this imperfect sketch of Brazil politics up to the period of Don Pedro's abdication, and will now close it with a few remarks on the character of that distinguished man.

While engaged in Brazilian interests, he devoted himself assiduously to the affairs of state, and was prompt in rectifying abuses, and vigilant over, even the minor departments of government. Considering his neglected education, and the pampered circumstances of his youth, he showed in his public conduct liberal and even extended views of policy, and may be said to have owed his fall more to his jealous adherence to the counsels of a party supposed to be hostile to the Constitution, than to any popular dislike to his person and conduct; and though he himself had given the Brazilians their Constitution, yet his policy led them to suspect his integrity towards it.

His subsequent career in Portugal and death, these are familiar to our readers, and his character now belongs to history. In personal appearance he was manly and commanding; in disposition brave and generous, though unfortunately at times both impetuous and capricious; imbued with a taste for poetry and music; a proficient in manly exercises and mechanical arts; and seemed, by his many qualities, formed by nature to sustain the title to which he was born—

Tentantem majora fere presentibus requiem.

LOWELL, AS IT WAS, AND AS IT IS.

In the second number of the National Magazine we gave to our readers some statistics of Lowell, Massachusetts, taken from a book published by the Reverend Mr. Scoresby, of England; and in concluding what he had to say, we stated that we should, doubtless, ere long, hear from Lowell itself, with a full detail of its statistics. In this expectation we have not been disappointed; we have now a full and complete statement in a book just published at Lowell, entitled "Lowell, as it Was, and as it Is," by the Reverend Henry A. Miles.

This book goes fully into every detail, from its Indian history and the first canal—the purchase of the farms and commencement of operations—up to the present year, 1845.

We have not room to follow Mr. Miles through his work, interesting as it is—nor is it necessary. Our readers are already well informed on many, if not all, of the subjects on which he writes, through the extracts made from the book of the Rev. Mr. Scoresby; at least, so far as the moral discipline of the Lowell factory system, and the general condition of the industrious population engaged in its various manufactories are concerned. We shall, therefore, content ourselves for the present, by offering to our readers the moral police of the Corporations, and the account given by Mr. Miles, of the general factory statistics, the Lowell Woollen Mill and its products, and the Carpet Mill. We select these in preference to any of the others, because there are in that city but these two mills appropriated to the woollen business, and we know of no account of them which has yet been published. Moreover, less is generally known of these processes (particularly the carpet making) than of the cotton business, particulars of which have been often published.

The following is a summary of the factory statistics, as given by Mr. Miles:

STATISTICS OF LOWELL—TAKEN IN 1845.

Population,	30,000
Employed in and about mills, or connected with mechanical employments—	
Females,	6,320
Males,	2,915—9,235
Churches,	33
Mills,	19
Houses, belonging to the Corporations,	250
Capital stock invested,	$12,000,000
Weekly make of cloth,	1,459,100 yds.
Which is per annum,	75,868,000 yds.
This is nearly enough to belt the globe twice around.	
Yearly consumption of cotton,	61,100 bales.
Printed calico annually made,	14,000,000 of yards.

Consumption annually.

Coal,	12,500 tons.	Charcoal,	600,000 bush.
Wood,	3,270 cords.	Starch,	800,000 lbs.
Oil,	47,000 galls.	Paid out for labour per annum,	$1,500,000

By arrangements now making and made, which will probably be soon completed, the business of Lowell will be extended to the amount of 20 per cent.

A great amount and variety of other business is done in Lowell, besides that of the incorporated companies. Mechanical skill and ingenuity here naturally concentrate, and the best of artisans and of workmanship, in almost all branches of mechanical industry, may be here found. The extensive powder works of Oliver M. Whipple, Esquire, are still in successful operation, making 885,000 lbs. of powder per annum. The Lowell bleachery, with a capital of $50,000, carries on a large business for an establishment of that kind. Besides these, Lowell has a flannel mill, blanket mill, paper mill, planing machines, a card factory, a whip factory, reed machines, foundry, grist and saw mills, sash and door manufactory, lock manufactories, carriage manufactory, and loom harness shops—all these together employing about five hundred hands, and a capital of $600,000.

A LOWELL WOOLLEN MILL.

But one establishment in this city is appropriated to the manufacture of woollen cloth. This is the Middlesex Company. Their wool comes from the States of Vermont, New Hampshire, New York, Ohio, Pennsylvania, Illinois, Missouri, and some, recently, from the Territory of Wisconsin. The quantity which is here annually manufactured equals the produce of four hundred thousand sheep. Received into the company's store-room, it is first assorted into eleven different kinds, according to degrees of fineness. The wool is then dyed; after which it passes through the picker. From the picker it is taken successively to the carding, spinning, dressing, and weaving rooms. The cloth is then "burled," as it is called, by which is meant a careful removal of all imperfect threads; and the next processes are those of scouring and fulling. At this stage of the manufacture, the cloth is applied to the "gig," or napping machine, by which the nap is raised; after which it is shorn, passing through the shearing machine from ten to sixteen times. The fine gloss of the cloth is then put upon it by steam; and after another careful examination by the "linters," it is marked, pressed, measured, done up in papers, boxed, and sent to Boston.

The large mill of this company is seven stories high, one hundred and fifty-eight feet long, and forty-six feet wide. Another, of nearly the same size, is soon to be erected. The quantity of broadcloth and cassimeres annually made, is about one hundred and fourteen thousand yards of the former, and six hundred and twenty thousand yards of the latter. Some of the yearly expenses attending this are as follows: logwood, six thousand dollars; indigo, twenty-two thousand dollars; glue, five thousand dollars; soap, eight thousand dollars; packing boxes, one thousand six hundred dollars; wrapping paper, one thousand dollars. Sales of cloth have amounted to eight hundred thousand dollars per year. The whole importation of cassimeres from England to the United States, in 1844, was seven thousand pieces; while this company alone manufactured, in that year, more than twenty thousand pieces.

A LOWELL CARPET MILL.

The Carpet Mill of the Lowell Manufacturing Company is the only one in the city. The wool that is here used is all imported from South America or the Mediterranean. Our domestic wools are not coarse enough for this manufacture. Hope is cherished, that by the extensive introduction of the Leicester breed of sheep into the Western States, the necessity of importation may gradually cease. The Lowell Company work up, annually, two thousand bales, averaging one thousand pounds of unwashed wool to the bale. The cost of this is less than seven cents per pound abroad. It contains fifty per cent. of dirt; in addition to which the South American wool has from fifteen to twenty-five per cent. of "burrs," and the Mediterranean from five to ten per cent.

In the manufacture, the first process is the washing and burring of the wool. The burring is thoroughly and expeditiously done by a machine, which was invented by a Lowell mechanic, and which has been patented both in this country and in England. The wool is then taken to the combing machine, in order to separate the long fibres of the wool from the short. From the former the worsted yarn is made for the warp. The separation of the long fibres of the wool for manufacturing was first undertaken in Worstead, a market town in the county of Norfolk, England, and hence the name applied to yarn thus made. The short fibres of the wool, technically called the "Noyls," are spun into filling, by the common carding and spinning process. No machine can more effectually and perfectly answer its end than this combing machine. Superintended by a female operative, who is assisted by a boy and a girl, it does the work of many men, and does it better than it could be done by hand. This also is the ingenious invention of Lowell artisans.

As soon as the yarn is cleansed and dyed, it is ready for the power-loom. No description of this remarkable machine can here be offered, nor are its operations often understood, even by those who see them. Placed in a lofty room, built expressly for its use, and supplied with warp and filling yarn, it turns out twenty-five yards per day of ingrain carpeting, of any design, and any colours which may be preferred. It requires the superintendence only of a young woman, who is notified by a bell, which the machine itself rings, of any imperfection of its work. This loom is the invention of E. B. Bigelow, Esq., a native of Massachusetts, and at one time a resident of Lowell. Fifty of these looms are in constant operation, in the only mill in the world for power-loom carpet weaving. Carpets so woven are firmer, match better, and have a truer selvage than those woven by hand. By the power-loom, a young woman easily does the work, which, by the hand process, required the hard labour of three men.

The Lowell Company are making, at the present time, three hundred thousand yards of carpeting per year. They also make rugs, the tufted, Chenille, and Brussels, employing for this purpose, twenty-five hands, who average twenty-five rugs per day. A power loom for Brussels carpet weaving is nearly completed, which is the only one in the country, and is the invention, likewise, of Mr. Bigelow. It has been purchased by the Lowell Company, who are forming plans with reference to the erection of a mill, for the extensive use of these looms.

MORAL POLICE OF THE CORPORATIONS.

It has been seen what a large amount of capital is here invested, and what manifold and extensive operations this capital sets in motion. The productiveness of these works depends upon one primary and indispensable condition—the existence of an industrious, sober, orderly, and moral class of operatives. Without this, the mills in Lowell would be worthless. Profits would be absorbed by cases of irregularity, carelessness, and neglect; while the existence of any great moral exposure in Lowell would cut off the supply of help from the virtuous homesteads of the country. Public morals and private interests, identical in all places, are here seen to be linked together in an indissoluble connexion. Accordingly, the sagacity of self-interest, as well as more disinterested considerations, has led to the adoption of a strict system of moral police.

Before we proceed to notice the details of this system, there is one consideration, bearing upon the character of our operatives, which must all the while be borne in mind. *We have no permanent factory population.* This is the wide gulf which separates the English manufacturing towns from Lowell. Only a very few of our operatives have their homes in this city. The most of them come from the distant interior of the country, as will be proved by statistical facts, which will be presented in a subsequent chapter.

To the general fact, here noticed, should be added another, of scarcely less importance to a just comprehension of this subject—*the female operatives in Lowell do not work, on an average, more than four and a half years in the factories.* They then return to their homes, and their places are taken by their sisters, or by other female friends from their neighbourhood. Returns will hereafter be given which will establish the fact of the average above named.

Here, then, we have two important elements of difference between English and American operatives. The former are resident operatives, and are operatives for life, and constitute a permanent, dependent factory caste. The latter come from distant homes, to which in a few years they return, to be the wives of the farmers and mechanics of the country towns and villages. The English visiter to Lowell, when he finds it so hard to understand why American operatives are so superiour to those of Leeds and Manchester, will do well to remember what a different class of females we have here to *begin* with—girls well educated in virtuous rural homes; nor must the Lowell manufacturer forget, that we forfeit the distinction, from that moment, when we cease to obtain such girls as the operatives of the city.

To obtain this constant importation of female hands from the country, it is necessary to secure *the moral protection of their characters while they are resident in Lowell.* This, therefore, is the chief object of that moral police referred to, some details of which will now be given.

It should be stated, in the outset, that no persons are employed on the Corporations who are addicted to intemperance, or who are known to be guilty of any immoralities of conduct. As the parent of all other vices, intemperance is most carefully excluded. Absolute freedom from intoxicating liquors is understood, throughout the city, to be a pre-requisite to obtaining employment in the mills, and any person known to be addicted to their use is at once dismissed. This point has not received the attention, from writers upon the moral condition of Lowell, which it deserves; and we are surprised that the English traveller and divine, Dr. Scoresby, in his recent book upon Lowell, has given no more notice to this subject. A more strictly and universally temperate class of persons cannot be found, than the nine thousand operatives of this city; and the fact is as well known to all others living here, as it is of some honest pride among themselves. In relation to other immoralities, it may be stated, that the suspicion of criminal conduct, association with suspected persons, and general and habitual light behaviour and conversation, are regarded as sufficient reasons for dismissions, and for which delinquent operatives are discharged.

In respect to discharged operatives, there is a system observed, of such an effectual and salutary operation, that it deserves to be minutely described.

Any person wishing to leave a mill, is at liberty to do so, at any time, after giving a fortnight's notice. The operative so leaving, if of good character, and having worked a year, is entitled, as a matter of right, to an honourable discharge, made out after a printed form, with which every counting-room is supplied. That form is as follows:

Mr. or Miss —— ——, has been employed by the —— Manufacturing Company, in a —— Room, — years — months, and is honourably discharged.

—— ——, *Superintendent.*

LOWELL, —— ——

This discharge is a letter of recommendation to any other mill in the city, and not without its influence in procuring employment in any other mill in New England. A record of all such discharges is made in each counting-room, in a book kept for that purpose.

So much for honourable discharges. Those dishonourable have another treatment. The names of all persons dismissed for bad conduct, or who leave the mill irregularly, are also entered in a book kept for that purpose, and these names are sent to all the counting-rooms of the city, and are there entered on *their* books. *Such persons obtain no more employment throughout the city.* The question is put to each applicant, "Have you worked before in the city, and if so, where is your discharge?" If no discharge be presented, an inquiry of the applicant's name will enable the superintendent to know whether that name stands on his book of dishonourable discharges, and he is thus saved from taking in a corrupt or unworthy hand. This system, which has been in operation in Lowell from the beginning, is of great and important effect in driving unworthy persons from our city, and in preserving the high character of our operatives.

Annexed are the Remarks of Mr. Miles, in

CONCLUSION.

We have now traced the successive steps of the growth of this city. We have described the extent of its business and the character of its operatives, and have alluded to the various institutions which its citizens have established for purposes of education, charity, and religion. When it is considered that Lowell is not yet twenty-five years old, its present condition cannot be contemplated without astonishment. Nowhere, but in New England, with the spirit of the Massachusetts people, and with Boston enterprise, could this great success have been wrought out. Other manufacturing villages have met with reverses and failures, but in Lowell these things have been unknown. No corporation has ever become embarrassed, or failed to meet its obligations, or have been obliged to suspend its works. The population which this great success has collected, possesses rather more than an average share of New England intelligence, as it is only the more enterprising who remove from their paternal homes; and with this, a full average share of New England good morals. Nor does the visiter to this industrious and thriving city see all of Lowell, even in Lowell itself.

When he thinks of the immense quantities of raw materials which are here demanded; of the cotton, wool, iron, coal, dye stuffs, and oils, here used up, and of the vast number of persons employed as producers, conveyers, agents, and clerks, he can hardly form a just conception of the amount of business which Lowell sets in motion, nor estimate the hundreds of thousands to whom Lowell gives employment.

The effect of the growth of this city upon the surrounding country is another interesting subject in political economy.

It furnishes one of the best markets in the world to an agricultural district of thirty miles in diameter. The improvements in this district, within the last fifteen years, have been manifestly great. Farms have been cleared of old mortgages, buildings and fences have been repaired, and real estate has risen in value to an extent often estimated at no less than a million of dollars.

In regard to the future career of Lowell, it would be unwise to predict. It is true that the water power, as at present used, is exhausted. Ninety-one mill powers have been sold of seventy horse power each. This is all the power of the river at the very lowest of low water, equal to six thousand three hundred and seventy horse power. The estimate of a mill power was made at a time when it was proposed to use much less machinery in a mill than is now run. Nearly two of the above mill powers are now required for a mill; so that the actual capabilities of Lowell, as the water is now used, amount to the power of forty-five mills. This, as has been said, is all appropriated. But by the introduction of steam, to be used in the dry seasons of the year, and by improved machinery, which will work with less friction and require less power, it is impossible to foresee to what extent Lowell may yet grow. It is estimated that full one half of all the power of a mill is required to perform the single process of spinning. If, as is supposed, the use of mule spinning will save one-half of this power, the entire operations of Lowell may be at once extended twenty-five per cent. This is only one illustration of the effect of those improvements which time perpetually reveals.

It is certain, then, that the growth of this place will continue as long as the general prosperity of the country endures, and new improvements in science and art are brought to light. The great experiment of Lowell is an experiment of another kind; it is an experiment whether we can preserve here a pure and virtuous population; whether there are no causes secretly at work, and to be developed in the course of thirty or forty years, to lower our standard, and to sink our character; whether we can run a career of half a century free from the corrupting and debasing influences which have almost universally marked manufacturing cities abroad. And a great experiment it is. We are deciding the question, not for ourselves alone, but for numerous other places around us—indeed, for New England itself. The branch of industry here established is every year rooting itself more firmly throughout this section of our land, the whole of which will, in a degree, repeat the career which we ourselves run. There have been laid for us here the foundations of a great success —a method of business well devised, and carefully adjusted part to part—a system of public instruction planned on a broad and generous scale—churches, Sunday schools, libraries, charities, numberless institutions, to enlighten, guide, and bless this growing city. Have we wisdom, and virtue, and firmness enough, to meet our dangers successfully? That is the true problem to be solved. May we look to that good Being who gives wisdom and strengthens virtue, and to Him shall be ascribed the success.

THOMPSONVILLE,

IN THE TOWN OF ENFIELD, CONNECTICUT.

The town of Enfield, Connecticut, was settled by emigrants from Salem, Massachusetts, in the year 1681—being at that time a part of the town of Springfield, in that State. It remained subject to the jurisdiction of the then colony of Massachusetts for about seventy years after its settlement, not being annexed to Connecticut until 1752. The town is bounded north by Long Meadow in Massachusetts, east by Somers, south by East Windsor, and west by Connecticut River, which separates it from Suffield. It is about six miles in length from north to south, and five and a half in breadth. The township is generally of a level surface, and the soil of a light sandy loam, and fertile.

The first bridge ever built across the River Connecticut, in this State, was erected in 1808, to connect this town with Suffield. It was supported by six stone piers, resting upon the rocky bed of the river, being one thousand feet in length and thirty in breadth; the expense of its construction was about $26,000. In 1832, a new bridge was erected, seventy feet in breadth, upon Mr. Town's plan, at an expense of about $15,000. A large proportion of the dwelling-houses in the town are situated upon one street, passing through the town, running parallel with the river. Vast numbers of ploughs are manufactured in this place. The town is also remarkable for growing tobacco in considerable quantities.

About eighteen miles north of Hartford, and eight miles south of Springfield, Massachusetts, the beautiful village of Thompsonville is situate, in this town, on the banks of the River, and upwards of a mile from Enfield bridge. Like many other villages in New England and elsewhere, throughout our country, Thompsonville owes its origin to the introduction and success of our manufactures, which here are of carpets and carpeting of various kinds. A company for this laudable purpose was established and incorporated in 1828, at which time not more than fifty inhabitants resided within the present limits of the village.

Anxiously desirous to introduce into their country the manufacture of carpets, a member of the present company was despatched to England, from whence he selected yarns already dyed and warped, leaving nothing to be done in the manufacture but the weaving, for which purpose suitable persons were selected, well skilled in that process.

In this prudent manner a commencement was made, and the manufacture conducted, until some of the parties here became well acquainted with one process after another, which were commenced, continued, and increased, as the demand for the article and the state of trade warranted. Sometimes yielding a small profit, and at times struggling under many discouragements, until, under the protection to the home market given by the late tariff acts, the company has been enabled to extend their works, until, at the present time, the population of the village has increased from fifty to one thousand persons, and every process of the manufacture of carpets is here carried on, from the raw wool to the highest finish of the finest Brussels and Axminster carpeting.

The village is handsomly situate, commanding an extensive view, both up and down the Connecticut River, exhibiting for many miles the beautiful valley for which that river is so renowned. The Hartford and Springfield Railroad passes through the village, a convenient and handsome station-house constituting one of its ornamental buildings.

There are of other public buildings, one Presbyterian and one Methodist church, and two hotels, besides about two hundred neat private dwellings. The buildings of the company consist of three large carding and spinning mills, three spacious buildings for weaving, one machine shop, one dyeing establishment, one blacksmith shop. There are also a saw mill, and grist mill, and six stores, in the place.

Wool consumed per annum, amounts to	1,000,000 lbs.
Flaxen yarn " " "	150,000 lbs.
Wages paid at factory per annum, "	$120,000
Consumed in the manufactories,	600 tons of anthracite coal.
" " " "	3,000 gallons of olive oil.
" " " "	3,000 " of whale oil,

besides a large amount of dye woods, drugs, &c. 480,000 yards of carpeting, of various descriptions, are here annually manufactured; they are principally yard wide, and are sold, those called ingrain, at from 55 cts. to 87 1-2 cts. per yard. A peculiar kind, known to the trade by the name of three ply, are sold at $1 35, and the Brussels are sold at $1 50, the prices being much below the prices formerly paid, when no carpets were made in the United States.

Besides the foregoing, there is now in the course of erection in this village a large brick factory, 150 by 40 feet, three stories high, which will soon be filled with machinery for the extensive manufacture of cotton, silk, flax, and woollen hosiery, drawers, shirts, &c.

The population of this village is now about one thousand to twelve hundred persons of both sexes and all ages, most of whom are employed in the various processes incident to the mannfacture of the carpeting.

The 1,000,000 lbs. of wool consumed is imported from South America and the Mediterranean, thus employing from four to five thousand tons of shipping, and paying a freight of one cent per lb.

1,000,000 lbs. of wool, at 1 cent per lb., is	$10,000
30 pipes of oil, freight $10 per pipe, is	300
Freight on dye stuffs,	300
600 tons of coal, freight at $2 per ton,	1,200
Freight to and from New York, estimated,	4,000
Freight to and from Hartford, "	2,000
	$17,800

All this value of labour and profit of freight, besides the profit on the manufacture, say an average of ten per cent. on the capital employed, is made on a coarse, raw material, which does not cost more than $70,000, all wool, at and under seven cents per lb., which therefore thus benefits the country and all parties concerned, while it does not interfere in the slightest degree with the domestic wool-grower who cannot afford to raise wool at so low a price, when with the same food and expense he can raise fleeces worth on an average thirty cents per lb.

Who can read this plain and simple statement of facts, without at once yielding his assent to the great advantage to the country of such an establishment? for it not only furnishes freight for our ships, to the above amount of $17,800, and uses foreign productions to aid in our commercial exchanges, furnishes consumers for the proceeds of our hardy whalers and for the no less laborious miners, but it makes a market for the farmers in the neighbourhood for food for 1,000 to 1,200 persons, who, were they not engaged in manufactures, would of necessity be employed in raising, more or less, agricultural productions.

TARIFFVILLE,

IN THE TOWN OF SIMSBURY, CONNECTICUT.

The ancient name of the town of Simsbury is said to have been Massacoe. The land was purchased of some Indians at a general court in 1676. Massacoe was made a separate town, ten miles northward from Farmington, and ten miles westward from Windsor.

The following interesting account of an almost miraculous escape of its early settlers from a massacre by the Indians, will best plead its excuse for its insertion here. It is taken from "The History of My Own Times; by the Reverend Daniel Barber, A. M.," printed at Washington, in 1827.

In the commencement of Philip's War in New England, in 1675, this town, Simsbury, was burnt by the Indians; connected with which event, current tradition has preserved and handed down the following singular and extraordinary fact: that very shortly before this attack by the Indians, early one Sunday morning, as Lieut. Robe's father was walking over the plain not far from his house, he very plainly and distinctly heard the report of a small arm, which much surprised him, it being the Sabbath. He found on returning to his house that his family also heard it. On going to meeting, at which the inhabitants from all parts of the town were assembled, it was ascertained that the report was heard at the same hour in every quarter. It was, on further examination, found to have been heard as far south as Saybrook, fifty miles, and as far north as Northfield, at that time the extent of the English settlements to the north. The report of this gun alarmed all Connecticut. The Governor summoned a council of war, to meet at Hartford; and the council issued an order for the inhabitants of Simsbury immediately to withdraw themselves to Hartford, the then capital. This order was punctually obeyed. The fearful apprehension of being suddenly murdered by the savages, put in motion and hastened along whole bands of women and children, with men in the rear, with sheep and cattle, and such utensils and conveniences as their short notice and hasty flight would permit. Hartford was twelve miles distant. Their heavy articles, such as pots, kettles, and ploughs, were secreted in the bottoms of swamps and wells.

The father of the first Governor, Wolcott, and his family, were among those who fled from Simsbury. Old Mr. Wolcott filled up a large brass kettle with his pewter cups, basins, platters, &c., &c., and then sunk the kettle with its contents in the deep mud of the swamp, but was never able to find it afterwards.

After the inhabitants had spent a day or two in their retreat, the men under arms were sent back for the purpose of looking about and making discoveries. They came to the highest eminence in the road east of Simsbury River, from which, at one view, they could take a survey of the principal part of their habitations, which, to their surprise and sorrow, were become a desolation, and every house burnt to ashes. They saw no Indians, but plenty of Indian tracks and trails in the sand.

I have recorded the story as a matter of fact, having very often heard it related as such, in my infant years, and also from the children of those who were both witnesses and personal sufferers.

My father's name was Daniel Barber. He was the son of Sergeant Thomas Barber, who was the grandson of Lieut. Thomas Barber, who commanded under Captain Westoven in the first military company in Simsbury. He was one of the original proprietors of that township, as appears from his name being still on the original charter. It is also reported of him, at a time when the savages were surrounding the town with a determination to destroy its inhabitants in the darkness of the night, that by means of his military skill and sagacity he prevented their attack; that the next morning, the wind being fair, he ascended the roof of his house, in the place called Hop Meadow, and beat an alarm on his drum. The beat was heard and understood at Windsor, seven or eight miles off. The militia took the alarm, and a company, under arms, made their appearance in the afternoon at Simsbury.

Thus far, this interesting account of the perils and dangers by which our heroic ancesters were continually surrounded, where now the war whoop is heard no more, but in its place the busy hum of the spindle, the noise of the hammer, and the music of the waterfall. On the west bank of the Farmington River, in this town, the flourishing village of Tariffville is situate. This river passes southward at the base of a range of high hills which separate this part of the State from the great valley of the Connecticut River.

Tariffville, like Thompsonville, owes its rise to a company incorporated in 1827, for the purpose of manufacturing carpets and carpeting.

The buildings of the company consist of two large carding and spinning mills; three spacious buildings for weavers; one machine shop; one dyeing establishment; one blacksmith's forge; about two hundred dwelling-houses, with many other shops and buildings. The population, principally depending upon the manufactory, is about one thousand.

There is here a large manufactory of fancy jeans and kerseys, which, being made of cotton and wool, consume four hundred bales of cotton, and swell the amount of wool so as to make its consumption here greater than that of Thompsonville, viz: about to 1,200,000 lbs. of wool consumed in carpeting, and jeans and kerseys.

Olive oil consumed, about	3,500 gallons.
Whale oil, about	3,000 "

Wages paid at the factory, one hundred and fifty thousand dollars per annum.

The same general remarks are applicable to this village as to Thompsonville, the wool of the same kind, imported from the same places, and this village confers the same benefits in every respect, only to a greater amount than Thompsonville.

The same species of carpets are made here, and sold at the same usual prices. It is not easy to imagine a more profitable employment to the country than is given to the population of these two beautiful and flourishing villages. Let the skeptic in the blessings of industry go to Thompsonville, or Tariffville, and see the healthy and contented population, who are all provided for, and made comfortable, by adding to the value of a coarse raw material, which pays large sums to the ship owner, the miner, the agriculturist, and the importer, all from the labour and skill which are bestowed upon it, in converting it from an unsightly mass into carpets of the most beautiful and serviceable texture, and of dyes variegated with all the colours of the rainbow.

COMPARISON

OF

THE BRITISH TARIFF OF 1845, AND THE UNITED STATES TARIFF OF 1842;

WITH AN EXTRACT OF SIR ROBERT PEEL'S SPEECH ON PRESENTATION OF THE FORMER TO PARLIAMENT.

Much has been said and written on the subject of the modification which took place in the British tariff in March last. The advocates of the so-called "free trade" have not failed to present it as a concession on the part of Great Britain to their abstract doctrines, and it has, therefore, been heralded forth as an act of great commercial liberality!

Now that the readers of the National Magazine may have a full opportunity to acquaint themselves with the facts in the case, we publish such parts of the speech of Sir Robert Peel, delivered on its presentation, as have any bearing upon the trade between Great Britain and the United States, by which it will be seen that he does not pretend to have any other object in view than the relief the British manufacturer.

But still more forcibly to illustrate its exact bearing upon the commerce between that country and this, we have taken considerable pains to prepare a statement, which will be found appended to this article, showing the comparative rates of duty levied by the former tariff of 1843, and that of 1845, on articles the growth, produce, and manufacture of the United States; also, the reduced rates at which the same articles are admitted to entry in England when imported from British colonies.

We ask the particular and close examination of this statement, which will incontestibly prove that no such idea as "free trade" entered in the slightest degree into the calculation of Sir Robert Peel; but that, on the contrary, the measure was adopted solely with a view to British interests, and so openly avowed to be by that enlightened minister, who in removing or lessening the duties on raw materials, made such reduction, lest the great advance which is in progress in manufactures both in Continental Europe and in this country, should interfere with those of Great Britain.

In order further to give a comparative view of the British and American tariff, we annex, also, a table showing the rates of duties payable on the principal articles imported into the United States from Great Britain and Ireland, according to our present tariff, passed in August, 1842, by which it will be seen that while the average of duty on articles imported into the United States from Great Britain, is but thirty-two per cent.; the statement of the duties on articles exported from the United States to Great Britain by the British tariff of 1845, shows an average of two hundred and seventy-six per cent. This is the "free trade" of Great Britain!

But to return to the extract from the speech of Sir Robert Peel, it is as follows, viz:

"We have determined to recommend extensive reductions in those taxes which, in our opinion, press more onerously on the community than the income tax. I first propose to take those taxes which are collected by the Custom's Board, and I shall submit to the consideration of the House on that point, what are the views of her Majesty's Government in respect te a reduction upon the duty on sugar. (Cheers.) The House will recollect that upon this subject an arrangement, temporary in its character, was made in the course of last year, by which sugar, the produce of countries where the article was cultivated by means of free labour, was admitted into competition with sugar the produce of our colonies. There was at that time no reduction proposed upon the produce of our own colonies. But propositions were made regarding the importation of free-labour sugar, which I think were generally considered as indicative of an intention on the part of her Majesty's Government, in the course of the present session, to call the attention of the House to the sugar duties, and to propose a reduction in them. The amount of discriminating duties proposed upon sugar, the produce of countries where sugar was grown by free labour, was 10s. 6d. Sir, we propose now to adhere to the general principle upon which we acted in the course of last year. We propose to restrict the competition of sugar, the produce of our own colonies, to sugar which is the produce of countries cultivating it by means of free labour, or which are entitled to the admission of their sugar into this country under reciprocity treaties which before existed. (Hear, hear, and a laugh.) [An hon. member made some observation which was inaudible to us.]

I beg it may be distinctly understood, that I do not wish to provoke any discussion on the subject now. All debate upon it had better be deferred to the time when the question of the sugar duties is regularly before the House. At the same time it is important, indeed necessary, that I should make a general allusion to the subject in the statement I am now making. (Hear, hear.) The discriminating duty proposed to be established in the act of last session, was, on free-labour British plantation sugar, 24s., and five per cent., and that upon free-labour foreign sugar, 34s., and five per cent.; which would produce, upon the former, a total amount of duty of 25s. 3d., and on the latter of 85s. 9d. But, in the course of last year, it was proposed, as a protection, to establish a higher discriminating rate of duty on free-labour foreign sugar, that was clayed, or equivalent to clayed. We declined, however, to accede to that proposal, as we found that there was no such rule established with respect to this sugar when the produce of our own colonies, but that there was a uniform rate with respect to all our sugars, except refined; and we were unwilling to establish a different rule with regard to the different qualities of sugar from other countries. We stated, at the same time, that if it were possible to establish a classification applying to our own as well as to foreign sugars, the subject might be well worthy of consideration, and it might be an arrangement proper to make. Some honourable gentlemen, who spoke on the other side of the House, endeavoured to establish the policy of a distinction between the coarser and finer kinds of sugar. We have had communication with the proper quarter, and it has been certified to us that it is possible, both with respect to our own and foreign sugars, to establish such a distinction. We propose, therefore, with respect to all sugars, except refined, the produce of our own colonies, to make this reduction of duty: In respect to brown Muscovado sugar, now subject to a duty of 25s. 2d., we propose to make a reduction of 11s. 3d., and to reduce the duty to 14s. (Loud cheers.) With regard to Muscovado sugar, that reduced duty will apply to all British plantation sugar—to sugar the produce of our West Indian colonies; and with regard to the produce of those districts in British India, with regard to which a different rule now applies, we propose, in the case of districts, to retain the same relative proportionate duty, and that duty shall be 18s. 8d. This is applicable to those countries of India which are permitted to import foreign sugar. We propose that the amount of protective duty shall not exceed 9s. 4d. and the duty on free-labour sugar will therefore be 23s. 4d. Of course, in countries with whom reciprocity treaties are in force, we cannot deprive them of that which is their right. With regard to white or clayed sugar, or sugar which by some process is made equal to clayed sugar, we propose that the duty on British plantation East Indian sugar, shall be reduced from 25s. 3d. to 16s. 4d., and that the duty on sugar imported from India, or those ports of India whence sugar may be imported, shall be 21s. 9d., and that the duty on free-labour foreign sugar, that is clayed, shall be 28s., thus retaining the whole amount of discriminating duty which last year was 10s. 6d., but applying it in a different manner, giving 9s. 4d. protection on Muscovado sugar, and increasing the protection to 11s. 4d. on the more valuable and costly article of clayed or white sugar. The amount of discriminating duty, therefore, would remain the same as it was last year. The duty on molasses we propose to preserve in the same proportion. It is necessary that I should make the intentions of the Government well understood; but at the same time, without going into minute details, reserving all those for consideration when the sugar duties come under the attention of the House, we propose to make a further reduction with respect to the admission of refined sugar. We propose to remove the prohibitory duty on refined sugar, and that it should be imported at a duty of 14s., instead of 18s. 9d., and that double-refined sugar should be imported under a duty of 21s., the 14s, including the five per cent. Now, it is important that I should give to the House the best estimate I can form of the probable amount of sugar to be derived from the possessions of this country abroad. For the purpose of obtaining information on that subject we have applied to four independent sources, with the view of obtaining an estimate of the probable supply of sugar from British possessions for the next year, and I will now read to the House, with its permission, the estimates that have been formed. The stock of sugar on hand on the 1st January last was 45,000 tons, and the estimate made by the Customs of the probable production of the British plantations is as follows: From the West India Colonies, 135,000 tons; from the Mauritius, 40,000 tons; and from British India, 70,000 tons, being the supply of sugar in the present year, independent of the stock in hand, of 245,000 tons. I trust that there may be reliance placed on the accuracy of this estimate, as it has been procured from the best sources of information. The next authorities which we have consulted, calculated the produce of the British plantations at 140,000, and British India at 70,000, making a total of 250,000 tons of sugar to be supplied during the next year. The next authority we consulted has not given so flattering an account. They have estimated the produce of British plantation sugar at only 120,000 tons, the Mauritius at 40,000 tons, and the British India at 70,000 tons—making an estimate of 230,000 tons. The fourth estimate, formed independently, as I said before, of any communication with the authorities for the other estimates, is this: The estimate for British plantation sugar is 130,000 tons, the Mauritius 40,000 tons, British India 95,000—making a total of 235,000 tons. The lowest of those estimates is 230,000 tons. If you add the highest to the stock in hand, that gives a supply of 295,000 tons; and if you take the lowest, it will give a supply of 275,000 tons. We consider that the effect of the reduction upon sugar will be, on the whole, a reduction of duty, so far as duty is connected with price, amounting to one and a quarter pence per lb., or not quite so much as one and a quarter pence. But if you add other charges that accompany a high rate of duty, we think the full effect of the reduction of the duty will be not much short of three-halfpence per lb.—(cheers)—because, as the duty increases, there are charges incidental to that increase.

I next propose to give to the House the best estimate we can form as to the probable loss to the revenue which will arise from that proposed reduction. As I said before, we calculate, independent of any supply of free-labour sugar—we calculate on a supply, including the stock in hand, of at least 275,000 tons for the present year. The greatest amount of consumption, I believe, has not been more than 207,200 tons in any one year. We think it is probable that the effect of the reduction of the duty may lead to an increased consumption of perhaps 43,000 tons. Of course these estimates must be taken as very general, but it appears to us probable that the increased consumption of sugar, consequent upon the reduction of duty, will make a total not much short of 250,000 tons. The consumption of British Muscovado sugar to the extent of 160,000 tons at 14s., would give £2,240,000. The consumption of clayed sugar to the extent of 70,000 tons, would give a revenue of £1,140,000; foreign free Muscovado sugar, 5,000 tons, at 23s. 4d., will give a revenue of £116,700; of clayed, or equal to clayed, 15,000 tons, at 28s., will give a revenue of £450,000. As I said before, these estimates must of course be very general: but supposing them to approximate to the truth, the consequence would be that we shall receive from the duty on sugar, in consequence of the reduction, the sum of £3,956,000. The revenue derived from sugar, in the last year, was £5,216,000. There will, consequently, be, very probably, a loss in the next year, to the revenue, of very nearly £1,300,000 upon sugar. (Hear, hear, hear.) Now, postponing any further discussion on the subject of the sugar duties until the period when they will come immediately under consideration, I proceed to enumerate the other duties of which we shall propose, as a consequence of the continuance of the income tax, the reduction, or the remission. It will be recollected that, when the tariff passed, in the year 1842, there were some small duties still retained upon exports from this country—exports either of raw materials, or manufactured articles so nearly approaching raw materials, that they could scarcely be distinguished from them. At the same time, it will be remembered that we abolished generally the duties on exports. They were all abolished, with the exception of a few articles, such, for instance, as I think, china stone, and some others of the same description. We propose to adopt, as a general rule, the abolition of export duties on all articles.

An Hon. Member.—Including coal?

Sir Robert Peel.—Not excepting coal. (Cheers.) I and my right hon. friends will do what we conceive to be our duty, without regard as to whether we may please or displease particular persons. We shall be actuated by other and higher considerations. Applying, then, a general principle to exports of every kind, we do not think it would be wise to reserve coal as an article of exception. (Cheers.) We do think that it will be an important principle to establish, that with respect to exports, there shall be no duty leviable—(cheering)—and in establishing that principle, we think that coal should be included. We are the more willing to act up to the full extent of the principle, inasmuch as the amount of revenue derived from coal has not met the expectation which was entertained when the tax was first imposed. The calculation of the amount to be received was £160,000, as a clear nett revenue, whereas the sum received last year from the duty on coal did not exceed £120,000. I believe that the export of coal has been greatly impeded in consequence of the combinations which have taken place among the owners of coal mines. So much, Sir, for the duties upon exports.

Lord John Russell (we believe) asked what was the total amount of the coal duty received by the Government? and what the amount of all the duties proposed to be repealed?

SIR ROBERT PEEL.—The total amount of duty on the exportation of coal does not exceed $118,000, and the revenue on the other articles is very small indeed. I now come to the duties which are levied on imports, and which, in amount, are very small in individual cases, *but which are applicable to articles which are raw materials used in manufactures.* I dare say most gentlemen have referred to the paper which has been prepared by direction of the Government for the purpose of exemplifying the operation of the present system of import taxation. It may probably have been observed, that by that document there are no less than 813 articles included in the tariff, 430 of which produce a very small amount of revenue indeed. We propose, Sir, to include in our financial arrangements the duties which are now applicable to those 430 articles. (Hear.) We are willing to try the experiment of abolishing the duties altogether, retaining the power of examination as to the weight and quantity, so that statistical information shall be secured, and precaution taken against the import duty being evaded on articles still liable to duty, under the pretence that those articles are free of duty. *The articles on which we propose to abolish the duties will be those generally which are the raw materials of our manufactures.* The list of these articles contains 430 specific items, and as that list will be printed, I do not think it necessary to make such a trespass on the patience of the House as to read over the whole of them. I think it therefore better to postpone the minute consideration of those articles till another opportunity; but I may state that the total number of articles that will be absolutely swept away from the tariff, will be no less than 430. These will include those fibrous materials, such as silk, hemp, and flax, which now pay a nominal duty; yarns of different kinds, *with the exception of worsted yarns, which are subject to some peculiar regulations.* We also propose to abolish the duty on furniture woods. [The right honourable baronet here excited considerable laughter, by markedly fixing his look on the honourable member for Halifax, Mr. C. Wood, while speaking on this part of his financial scheme.] There is (continued the right honourable gentleman) a great trade growing up in this country, which it is very desirable to promote; and for that purpose I propose abolishing the duty on all cabinet-making materials. (Continued laughter.) The amount of duty at present levied on cabinet woods—(renewed laughter)—is very low, and we think that the same principle which has already been applied to sheep's wool, ought to be applied to those materials. We propose, also, to abolish the duties on animal and vegetable oils. These were included in the tariff. We propose likewise to remove the duty upon ores and minerals, with the exception of copper ore, with respect to which an arrangement was made in 1842, and which has worked exceedingly well. The duties on iron and zinc, in the first stages of manufacture, will also be abolished: and we intend to remove the duties on all dye stuffs, and on drugs, universally, with the exception of some that are very noxious, and liable to be used as adulterations. There are some other articles with respect to which, partly from this and partly from other considerations, this total removal of duty will not take place. I do not propose materially to interfere with the general principles which we have applied to the timber duties. The cooperage trade has been gradually decaying in this country. Even in our own possessions the export of staves, and the articles that are made from them, is exposed to a formidable competition on the part of the United States. The United States are now supplying West Indian colonies with this important article of trade. We thought it better, on the whole, to class the article of staves with those that are raw material, and permit a free and unrestricted import of staves for the use of the coopers. Of course it would be necessary that we should limit the length of the staves, so that they may not be applied to other purposes; but without very minute and vexatious regulations, it will be impossible to prevent the importation of staves, altogether, which may be used for other purposes. Upon the whole, therefore, we will endeavour to submit to that evasion of our intention, rather than establish minute regulations for the purpose of preventing it.

Mr. Labouchere.—Do you remove the duty altogether?

Sir Robert Peel.—Yes, we take it off altogether.

Mr. Labouchere.—What is the amount?

Sir Robert Peel.—The amount of duty on this article, I think, is about £33,000. We remit it altogether. We diminish the temptation to apply staves to the ordinary purposes of furniture, by making a simultaneous reduction in the duty upon all cabinet timber.

Mr. Labouchere.—What is the essential sacrifice of revenue on all these articles?

Sir Robert Peel.—I think the loss of the revenue, by the remission of the duties on all these 430 articles, will be about £320,000. I now come to that article which, of all others, is the most important to the manufacturing and commercial prosperity of this country. (Loud cheers.) I come now to cotton wool—(hear, hear)—and the duty upon it. The present duty on cotton wool is, so far as the revenue is concerned, 5-16ths of a penny the pound weight; but as that duty is applicable to the whole amount of cotton wool imported, and as about one-fifth of the total amount of such cotton wool is unavailable for the purposes of manufacture, and is necessarily waste, the duty, of course, presses with increased severity upon that portion of the whole amount which is capable of being used for manufactures. It is estimated, and I believe the estimate to be a reasonable one, that we ought to add 1-16th more to the 5-16ths, in order to calculate the full amount of duty paid upon the whole of the cotton wool that is actually manufactured in this country. 6-16ths, or 3-8ths of a penny per pound weight would, therefore, be the total amount of duty paid on cotton wool. Now, when the price of cotton wool is 4d. a lb. on the average, 3-8ths of a penny per lb. is a duty of nine per cent. on the value of the raw material. If the price of cotton wool be, as it has been of late, not more than 3d. a lb., 38ths of 1d. per lb. is a duty amounting to not loss than 12 1-2 per cent. on the value of the raw material. This duty, so levied, falls with peculiar severity on the coarsest descriptions of cotton. Upon the finer muslins you can hardly estimate the amount of duty, it is so small; but the coarser the fabric, and the more it is in common wear, the higher is the amount of duty. Seeing and considering these things—seeing the amount of duty imposed upon the coarser fabrics—seeing the extent of competition to which they are exposed—seeing the importance of this manufacture to the commercial greatness of this country, we are prepared to advise the abolition of the duty upon cotton wool. (Loud and long continued cheering.) The estimated loss to the revenue by the abolition of the duty on cotton wool—taking as a guide the amount received last year—will not be less than £680,000. (Hear, hear.) In respect, then, to the revenue derived from the customs duties, we do not propose to make any further alterations than those to which I have now referred."

BRITISH TARIFF.

Comparative Rates of Duty levied by the former and new British Tariffs, on articles the growth and produce of the United States, and the rates per cent. from British Colonies:

ARTICLES OF EXPORT.	Former Duty, per Tariff of 1843.	New Duty, per Tariff of 1845.	Rate per cent. from British Colonies.
	Rate per cent.	Rate per cent.	
Apples,	24	24	8
Do. dried,	48	48	48
Ashes, pot and pearl,	2½	free.	free.
Bark, quercitron,	5	free.	free.
Bacon,	50	50	12½
Beef,	67	67	16½
Beans,	20	20	10
Butter,	36	36	9
Candles, spermaceti,	36	36	36
Do. stearine,	33	33	33
Do. tallow,	19	19	19
Candlewick,	20	free.	free.
Cotton,	7½	free.	free.
Casks, empty,	25	25	25
Cheese,	45	45	11
Cider,	840	840	840
Clocks,	20	20	20
Corn, (Indian,) average,	33	33	5
Feathers,	14	free.	free.
Fish, cod,	16	16	free.
Flour, (average,)	33	33	9
Hams, (see Bacon.)			
Hops,	275	275	275
Lard,	7	free.	free.
Lead,	6	free.	free.
Molasses,	255	255	255
Oil, linseed,	15	free.	free.
Oil, fish,	29	29	free.
Oil, sperm,	36	16	free.
Pork,	34	34	8½
Rice, cleaned,	48	48	4
Rosin,	107	free.	free.
Snuff,	1,800	1,800	1,800
Soap,	107	107	71½
Spirits from grain,	2,347	2,347	939
Spirits from molasses,	2,000	2,000	600
Starch,	42½	42½	21
Sugar, brown,	255	83	55
Sugar, loaf,	327	327	40
Staves,	41	free.	free.
Tallow,	9	9	1
Tar,	3	free.	free.
Tobacco, leaf,	2,056	2,056	2,056
Do. manufactured,	2,400	2,400	2,400
Turpentine,	27½	free.	free.
Twine, Kentucky,	33	10	5
Vinegar,	252	40	40
Wheat, (average,)	32	32	6
Wool,	8	8	free.
Number of articles, 48	13,916	13,263	9,879
Average rate of duty,	289	276	206

The average reduction in the rate of duty on the above articles by the new tariff, it appears, is thirteen per cent., and this includes cotton, pot and pearl ashes, naval stores, and other articles, now admitted free of duty for the benefit of British manufacturers.

The discrimination in favour of British colonies, it will be observed, is seventy per cent. in the average rate of duty on the above articles; or, if we take the twenty-three articles on which a discrimination is made, the average rate of duty when imported from the United States is two hundred and thirty-five per cent., and on the same from British colonies the average duty is eighty-eight per cent.: discrimination in favour of the latter one hundred and forty-seven per cent.

Statement of the Rate of Duties payable on the principal Articles imported into the United States from Great Britain and Ireland, according to the present Tariff, passed August, 1842:

		per cent.			per cent.
Woollens,	(average)	40	Hardware,		30
Worsted,		30	Iron,	(average)	40
Cottons,	(average)	50	Saddlery,		30
Linens,		25	Steel,		16½
Hemp, manufactures of,		20	Tin,		1
Silk, manufactures of,	(average)	40	Brass, manufactures of,		30
Cotton Bagging,	do.	34½	Copper, do.		30
Flannels,	do.	33	Plated ware,		30
Baizes,	do.	40	Gilt do.		25
Carpeting,	do.	40	Gold and silver jewellery,		20
Lace, thread,	do.	15	Do. watches,		7½
Lace, cotton,	do.	20	Do. lace,		15
Lace, bobbinet,	do.	40	Ale and porter,	(average)	50
Paper,	do.	75	Drugs,		20
Books,	do.	25	Salt,	(average)	50
Engravings,		20	Coal,	do.	60
Twine,	(average)	33			
Leather, manufactures of,		35	35 articles,		1,140½
Earthenware,		30	Average (nearly)		32
Glass,	(average)	40			

N. B.—On those articles which pay specific duties, the rate per cent. is calculated on the average cost of the same articles in Great Britain.

M'CULLOCH'S

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Political Economy in general, and its fundamental principles.

Commerce and Commercial Policy, including Corn Trade and Corn Laws, Colony Trade, Colonization; History and Condition of Trade; Navigation in Peace and War, Shipping, Consuls, &c.; Commercial Law, Partnership, &c.; Weights and Measures; Bookkeeping and Mercantile Accounts; Commercial Treaties, and History of Commerce and Navigation.

Money, Banks, Exchanges, Coin and Coinage, &c.

Influence of Enclosures in Prices, and History of *Prices*.

Roads, Canals, Railways, &c.

Political Arithmetic, Statistics, and Agricultural Economy.

Coal Trade; Herring and other *Fisheries*.

Manufactures; Arts; Insurance of Lives, Ships, Houses, &c.

Interest and Annuities, Usury, Survivorship, Reversionary Payments.

Population and its Progress; Foundlings and Foundling Hospitals.

Naturalization. Bills of Mortality, and works having reference to Health and Mortality.

Wages, *Pauperism*, Poor-Laws, Saving Banks, Friendly Societies, &c.

Right of Property, Law of Succession, Copyrights, Patents, &c.

Slavery. Revenue and Finance; Taxes and Contributions, Public Debt, Sinking-fund, Customs, Excise, Smuggling, Pawnbroking, Inventions and Discoveries, &c., &c.

Although it would not be difficult to point out omissions of valuable publications under almost every one of these heads; yet, being aware, from Mr. M'Culloch's preface, that he intended to proceed "on a prinple of selection, and to notice those works only which appear to have contributed to develop sound principles, or to facilitate their adoption," we thank him cordially for the index which he has furnished us to the select and really useful Literature of Political Economy.

"In addition to those works that have conduced to elicit *true* principles, or to facilitate their application, we have," says Mr. M'Culloch, "specified a few of the works in which *erroneous* theories and opinions have been most ingeniously and ably defended, or which have had considerable practical influence. But we have been sparing in our references to this class of publications, and have taken no notice of those recommending a reduction of the standard of money, the issue of inconvertible paper, the employment of a double standard of value, and similar crudities. Neither have we referred to any work merely because it happened to be scarce; it must have had something else than rarity to recommend it to a place in our pages.

"If we have succeeded in our object, this work will be in some measure a history of Political Economy, as well as a critical catalogue of the principal economical works. It contains short notices of the rise of some of the principal theories, and of the circumstances which appear at different periods to have strongly determined public opinion upon economical questions, and given birth to classes of books. Without such notices, indeed, no just estimate could be formed of the latter.

"But apart from these considerations, the history of this science has peculiar claims to attention. It is, for the most part, conversant with matters that belong to the everyday occupations and business of mankind; and some of its more important conclusions appear to be opposed to the most obvious deductions. Under such circumstances, it cannot be uninteresting to trace the rise of new opinions, to observe the strong prejudices with which they have to contend, the errors that are often engrafted upon them, the mode in which one idea leads to another, and the generally slow and difficult process by which true doctrines come to be finally established and their justness universally admitted.

"The criticisms we have ventured to make, are, in most instances very brief, being intended to give merely a general idea of the works to which they refer, without entering into a minute or detailed examination of their merits or defects. We have endeavoured to characterize them fairly, according to the view we take of the principles of the science, and shall regret, should it appear that we have misapprehended or underrated any work of merit."

The value of this work as a book of reference, which, of course, it was intended to be, is very much increased by the addition of a double index: one part comprising the names of the authors, the other those of books and tracts.

We have dedicated thus much space to a sketch of the contents of this very useful book, and to a statement, in the author's own words, of the objects which he had in view, and the mode in which he has endeavoured to execute those objects. Of the value and importance of the book, there can be only one opinion, and that a decidedly favourable one; but there will not be the same unanimity with respect to the view which he entertains of certain principles of political economy, or to the correctness of some of his criticisms. Mr. M'Culloch says, "some of its (Political Economy) more important conclusions appear to be opposed to the most obvious deductions." We confess that we are at a loss to conceive what he means; we have read a good deal upon the subject, and it has occupied a considerable portion of our thoughts, and we have always entertained the opinion that all the "important conclusions" at which we arrived by reading and reflection, were perfectly coincident with our "obvious deductions." Obvious deductions! of what? not of reason and reflection; because these *conclusions* (*quasi* "deductions") are placed by Mr. M'Culloch in opposition to these. We really do not comprehend. If Mr. M'Culloch had said that some of the more "important conclusions" of the advocates of any particular school of economists, as deduced from the *creed* of that school, were opposed to the most "obvious deductions" of mankind, we might have agreed with him. But we must contend that the "important conclusions" of the political economist, who, without regard to the *theory of a school*, or a party, thinks for himself, and follows his convictions wherever they may lead him, will never be opposed to, but will always coincide with, the "obvious deductions" of the common-sense man, however he may be immersed in the "everyday occupations and business" of life. He who is determined to support a *theory*, will have to make sacrifices of reason and conviction; but he who follows the *truth*, as it appears to him, wherever it may lead him, will never have reason to complain of her guidance, or be justly chargeable with inconsistency.

This is not the place in which to notice Mr. M'Culloch's free-trade principles; we are quite willing that he should apply them to the European world; and we are not quite sure but that the peculiar circumstances in which some portions of that section of the world are at present placed, render an approximation of the free-trade policy not only desirable, but necessary; but as citizens of the United States, with an immense country to settle, and limitless resources to develop, we are very differently situated from England, with all her soil cultivated, all her resources in operation, and with millions of people who depend upon daily employment for daily bread, and whose daily bread must be miserably scanty unless furnished cheaply. A system of political economy cannot be made equally applicable to the whole world, like a system of mechanics, or a treatise on arithmetic; to act wisely, we must be governed by circumstances; a nation in its incipient or forming state, requires very different legislation from one in its full development, or when in its decline. Without pretending to meddle with the free trade question as applied to England, our aim at present is to enter our protest against the application of it to this country, as made by Mr. M'Culloch in some of the quotations we shall hereafter make from his book.

We have our own notions with respect to what we call COMMERCIAL LEGISLATION; perhaps our opinions are peculiar—we are sure that they are free from any party or political bias, for they would not be found to coincide with those of any party; they are based, we think, upon general abstract principles, and carried out by a general application to all the interests, and all the various divisions of employment and pursuit which obtain among us. We are of opinion that, inasmuch as the United States differs from all other countries in her form of government, in her civil and political institutions, and also, as a matter of course, in the habits of thinking, feeling, and acting of her citizens, that it is necessary that a code of commercial regulations, of finance, of taxation, and of revenue, must also have some distinguishing feature, not found in those of the old world, in order to give it a peculiar adaptation to the people of the United States.

We mention this peculiarity in our opinions, not with a view of entering upon an explanation of them at this time, but because we may hereafter, in the present article, make some observations, which might otherwise render us liable to the charge of inconsistency.

But we are losing sight of Mr. M'Culloch's very excellent book. "HOBBES," says Mr. M'Culloch, "seems to have been one of the first who had any thing like a distinct perception of the real source of wealth. His apprehension was, however, far from being so clear as Locke's, as exhibited in his 'Essay on Civil Government,' published in 1689. The first attempt to produce a systematic treatise on political economy, was made by M. Quesnay, a French philosopher, distinguished for the subtlety and originality of his understanding, and the integrity and simplicity of his character. He assumed, as a self-evident truth, and as the basis of his system, that the *earth is the only source of wealth*. This was published in 1758. Dr. Adam Smith was well acquainted with Quesnay, and while he bears testimony to the modesty and simplicity of his character, he pronounced Quesnay's system to be, "with all its imperfections, the nearest approximation to the truth that has yet been published upon the subject of political economy." Mr. M'Culloch takes a brief survey of the works of the French economists, the cotemporaneous and immediate successors of M. QUESNAY, and passes on to *Adam Smith*, who, he says, "has an undoubted claim to be regarded as the founder of the modern system of political economy, and to be classed amongst the most eminent benefactors of his species." We cannot follow *Mr. M'Culloch* through his interesting survey of the works of Lord Lauderdale, Ricardo, Mill, Malthus, Torrens, Whateley, Scrope, Senior, De Quincey, &c., nor yet more than enumerate the French writers, Isnard, Say, Tracy, Storch, Garnier, Ganibl, Droz, Chevalier, &c.

Respecting two American authors we have the following notices:

"'LECTURES on the Elements of Political Economy, by *Thomas Cooper*, M. D., Columbia, S. C., 1829.'

"This work, though not written in a very philosophical spirit, is the best of the American works on political economy that we have met with."

"'PRINCIPLES of Political Economy, by H. C. Carey, Esq., 3 Vols. 8vo., Philadelphia, 1837–40.'

"This work is written in a fair-handed spirit, and is the fruit of a good deal of reading and research. But it is crude and indigested, being deficient in criticism, and without any clear or well-defined principles. For the most part, indeed, the conclusions are deduced from statistical and other statements of very questionable authority, and which admit of various interpretations. It is, consequently, of little value. Even the portion which treats of production is infected with sundry grave errors; and these become still more numerous and important in the other parts of the work."

It must be, of course, understood that we do not endorse the opinions, either laudatory or the reverse, which we extract from the publication before us. They are to be taken, whatever may be their description, or their value, as the strictures of Mr. M'Culloch, and interesting to us only as far as they show the view taken of our authors by that experienced and talented writer.

Probably but few persons are aware of the numerous able publications on subjects connected with political economy by Italian writers. They have written many works on the subject of money, in particular. The best of the Italian publications have been republished, 1803, 1816, in a chronological series, by the Baron Cisstrodi, under the title of "*Scrittori-Classici Italiani di Economia Politica*"—50 volumes, 8vo. Mr. M'CULLOCH calls this "a publication which does honour to Italy;" he gives the contents of the 50 volumes at length.

We do not intend to follow Mr. M'Culloch through his valuable catalogue, but merely to glean here and there a few interesting statements, or short morsels of criticism, and shall then select the notices of American authors inserted under the different heads.

"'An Account of the European Settlements in America,' published in 1757, in 2 vols., 8vo., and which is usually ascribed to Edmund Burke, has been affirmed," says Mr. M'Culloch, "and on apparently good grounds, to have been written partly by Edmund's brother, Richard Burke, and partly by their namesake, William Burke." (p. 88.)

During the war of our independence, Dr. Tucker, Dean of Gloucester, published several tracts, in which he endeavoured to show, "that the differences between the mother country and the colonies were not of a kind that could be adjusted otherwise than by a complete separation, and that we should consult our interest by acknowleding their independence. But this judicious and sound advice was regarded with disdain, even by those who were most opposed to the contest. The truth is, that no nation ever voluntarily gives up any dominion, however worthless or costly. All concessions of independence to colonies must be compulsory, and are invariably obtained from the inability or weakness, not from the good sense, justice, or generosity of the mother country." (p. 91.)

A pamphlet, under the following title, receives great praise: "The Advantages of the East India Trade to England Considered, wherein all objections, &c., to that trade are fully answered, 8vo., London, 1720."

Of this publication *Mr. M'Culloch* says, "Though rather tautological, this is a profound, able, and most ingenious tract. The author is probably the first who has conclusively shown the advantage of employing machinery and cheaper modes of production in the manufacture of commodities, and who has shown that such employment is not injurious, but advantageous to the labourers, as well as to the other classes of the community. He has, also, set the powerful influence of the division of labour in the most striking point of view, and has illustrated it with a skill and felicity which even Smith has not surpassed, but by which he most probably profited." We should like to find a place for the extract which Mr. M'Culloch gives from this shrewd and powerfully written pamphlet; the author (unknown) was a free trader in every sense of the word; but he argues more from the abuses of the protective system, than from any thing charged with being essentially erroneous in the system itself. The writer says: "The East India trade" (the freedom of which he advocates) "*destroys no profitable English manufacture; it deprives the people of no employment which we should wish to be preserved.*" The anti-protective policy, with which the United States is now threatened, is of a diametrically opposite description. In fact, things appear to change their nature so completely in a hundred years, that they are no longer to be known by the same names. The free-trade policy advocated by this writer in 1720, would be hailed, in this country at least, as sufficiently good protective policy in 1845.

"Conferences on the Public Debts, by the Wednesday's Club, in Friday street, by Mr. William Patterson, 4to., London, 1695."

This scarce tract gives an account of the proceedings connected with the establishment of the Bank of England, whose principal projector was this Mr. Patterson; one of his most active coadjutors was Michael Godfrey, Esq., who was the first Deputy Governor of the Bank. Patterson was a Scotchman, born in Dumfrieshire, in 1660. He was a man of unquestioned talents. Not long after founding the Bank of England, he projected the ill-fated colony at Darien, and was, by its failure, involved in very heavy losses. Such, however, according to Anderson, was the opinion of his merits and services entertained by the House of Commons, that they voted him, in 1713, £18,241 10 10 3-4, as a compensation for his losses. This account does not agree, however, with other statements which represent Patterson as surviving the Darien scheme for many years, pitied and respected, but totally neglected by his countrymen. "It has been repeatedly stated," says Mr. M'Culloch, "that Patterson was also the founder of the Bank of Scotland, but this is an error. The Bank of Scotland was projected (it was incorporated in 1695) by Mr. John

Holland, an Englishman—a fair set off—the Bank of England having been founded by a Scotchman."

It appears by an observation of Mr. M'Culloch, at page 184, that Sir Robert Peel, in his late separation between the banking and issuing department of the Bank of England, adopted the suggestion of Mr. Loyd an eminent London banker. "It would be unjust," adds Mr. M'Culloch, "to dismiss the subject without observing how deeply the public is indebted to Sir Robert Peel for his whole conduct with respect to the currency. It may be truly said of him, *monetam in justum valorem restituit.* It was mainly owing to his exertions and his influence, that the act of 1819, which restored our old standard, and saved the country from the indelible disgrace of a fraudulent bankruptcy, was carried. He has also steadily opposed the schemes and projects of those who have been clamouring for a change in the mint regulations, and for the contradictory absurdity of a double standard. And he has now gone far to complete the great work he so auspiciously began in 1819, by improving the system of the currency, and providing, as far as circumstances would admit, against those mutations in the quantity and value of money, that have been, and always will be, so extremely injurious."

Sir William Pitt, author of the Political Arithmetic, and other works on statistics and correlative subjects, was one of the most remarkable men of the seventeenth century; his talent laid not only in the peculiar line which he elucidated by his writings, but were of the most varied and contradictory description. He is said, by his cotemporaries, Evelyn and Pepys, to have been distinguished for his proficiency in polite literature, medicine, mathematics, and mechanics, and by his great shrewdness and sagacity in practical matters. The map of Ireland which he constructed, was, in Pepys' time, considered the best map which had been made, of any country. He was the best Latin poet of his day. "There were not in the whole world," says Evelyn, "his equal for a superintendent of manufacture and improvement of trade, or to govern a plantation." "If I were a prince, I should make him my second counsellor, at least." "He was, with all this, facetious and of easy conversation, friendly and courteous," and possessed, it appears from Pepys, wonderful powers of mimicry and imitation, a faculty which he very rarely indulged in, even among his most intimate friends. "It is much to be regretted," says Mr. M'Culloch, "that we have nothing like a complete or respectable edition of the works of this extraordinary man."

A curious tract, by the celebrated Daniel Defoe, entitled "Giving Alms, no Charity; and Employing the Poor, a Grievance to the Nation," published in 1704—discusses a question which has attracted attention at the present day. It is written with the usual cleverness of the author, and is principally directed against a bill, then before Parliament, for setting up manufactories in workhouses. Defoe's arguments in opposition to this project, are as follows: "Suppose now a workhouse for the employment of poor children sets them to spinning of worsted. For every skein of worsted these poor children spin, there must be a skein *less* spun by some poor family, or person that spun it before. Suppose the manufacture of making bags to be erected in Bishopsgate street, unless the maker of these bags can find out at the same time a trade or consumption for more bags than were made before, for every piece of bags so made in London, there must be a piece the less made in Colchester.

"If they will employ the poor in some manufacture which was not made in England before, or not bought with some manufacture made here before, then they offer at something extraordinary.

"But to set poor people at work on the same thing that other poor people were employed on before, and at the same time not increase the consumption, is giving to one what you take away from another; enriching one poor man to starve another; putting a vagabond into an honest man's employment, and putting his diligence on the tenters to find out some other work to maintain his family."

"But these arguments," says Mr. M'Culloch, "are not so conclvsive as some have supposed. It is to be borne in mind that the occupiers of prisons and workhouses must be supported whether they are employed or kept in idleness; and such being the case, if it be practicable to employ them so as to furnish produce that will sell for £5,000, £10,000, or any other sum over and above the cost of the material, it would surely be the climax of absurdity to refuse to avail ourselves of their services. Whatever they produce while in confinement is so much nett addition to the public wealth, and the taxes required for their support may be reduced accordingly. It is no good reason to refuse to profit by their labour, to allege, as Defoe has done, that for every skein of yarn spun in a workhouse, a skein the less must be spun elsewhere. The skein spun in the workhouse really costs nothing, for its inmates must be fed and maintained at the public expense, whether they spin or not. Neither is the market limited, as Defoe supposed; and though it were, there is an infinity of other branches of industry to which the unemployed poor may resort. This, in truth, is the identical sophism that is always in the mouth of those opposed to the introduction of machinery, and to every sort of improvement."

The warehousing system, which was proposed by Sir Robert Walpole in 1733, and lost through the delusion of the public mind respecting it, and the operation of strong party spirit, was not adopted until 1803. Mr. M'Culloch calls it "a signal improvement—the greatest, perhaps, that has been made in the financial and commercial system of the country."

At page 334, when concluding an article upon the sinking-fund, Mr. M'Culloch observes: "The history of the world does not furnish another instance of so extraordinary a delusion. Had the sinking-fund involved any unintelligible dogmas, had it addressed itself to popular feelings and passions, or had the notion of its efficacy originated with the mob, the prevalence of the delusion would have been less unaccountable. But it was from the first a matter of mere calculation; it was projected by some of the best informed persons of the country, who continued for upwards of twenty years to believe that they were rapidly diminishing the public debt by the agency of a fund, which was all the while kept on foot by borrowed money! Dr. Hamilton, of Aberdeen, has the merit of having dissipated this delusion—the grossest, certainly, by which any civilized people was ever blinded and deceived!" Dr. Hamilton's work was published in 1813, when the author was more than seventy years of age. The third and last edition was published in Edinburgh in 1718. We do not, by any means, agree with Mr. M'Culloch in his sweeping conclusion.

We will now give Mr. M'Culloch's criticisms upon such American publications, upon the subjects included in his catalogue, as appear to have come under his notice.

Mr. Cambreleng's "Examination of the New Tariff proposed by the Hon. Henry Baldwin, 1821," is called "a well reasoned, conclusive tract."

"A Digest of the existing Commercial Regulations of Foreign Countries with which the United States have intercourse, as far as they can be ascertained. Prepared in compliance with a Resolution of the House of Representatives, 3d March, 1831—3 vol., 8vo.—1833-36."

Mr. M'Culloch calls this a work of the same description, though less copious and complete, as that prepared in 3 vol., folio, by Mr. McGregor, of the British Board of Trade. He had "not examined it with sufficient attention to give any opinion of its accuracy."

"Report of the House of Representatives, of the 8th of February, 1830, on Commerce and Navigation, drawn up by Mr. Cambreleng, 1830."

This report is called "a forcible exposition of the mischievous influence of the restrictive system."

"Pitkin's Statistics" is noticed only by the title.

"Seybert's Statistics" is not mentioned.

When noticing Judge Story's "Commentaries on the Law of Bailments," Mr. M'Culloch observes: "It is, we believe, generally admitted that the Americans have attained to higher distinction by their legal writings than by their efforts in any other liberal pursuit; and of those who have so distinguished themselves, a very high place is occupied by the author of the present work. It is not certainly so classical or finished a performance as the essay of Sir William Jones, on the same subject; but it takes in a wider field, and brings to the discussion of some of the more important points in commercial law a wider range of legal learning, and a sagacity and sobriety of judgement not often met with. The following is also a very valuable work.

"'Commentaries on the Law of Partnership, as a branch of commercial and mercantile jurisprudence, by Joseph Story.'

"'Report upon Weights and Measures, by John Quincy Adams. 1821.'

"Col. Pasley has spoken in very high terms of this work. 'Mr. Adams,' says he, 'has thrown more light on the history of old English weights and measures than all former writers on the same subject; and his view of historical facts, even when occasionally in opposition to the Reports of our own Parliamentary Committees, appear to me to be the most correct. For my own part, I confess that I do not think I could have seen my way into the history of English weights and measures in the feudal ages without his guidance.'"

Col. Pasley, who pays this compliment to Mr. Adams, was employed by the British government to report on the steps to be taken for the restoration of standards of weights and measures, when the standard yard was destroyed by the fire at the House of Commons.

"'Considerations on the Currency and Banking System of the United States, by Albert Gallatin, 1831.'

"This is a valuable pamphlet; but a great deal of light has since been thrown on the defects and vices of the American Banking System.

"'A short History of Paper Money and Banking in the United States, &c., by William M. Gouge, 1833.'

"A work which gives a variety of striking and curious details, illustrative of the frauds committed in the getting up, and managing of the American banks.

"'On Credit, Currency, and Banking, by Eleazar Lord, 1834.'

"In so far as respects general principles, the positions in this tract are mostly unexceptionable; but the practical measures suggested are of a very different description.

"'The Credit S[illegible]em of France, Great Britain, and the United States, by H. C. Carey, 8[illegible] 1838.'

"'Answers to t[illegible]estions, What constitutes currency? What are the causes of unstead[illegible] of the currency? and, What is the remedy? by H. C. Carey, 8vo. [illegible]0.'

"It is needless [illegible]y more of Mr. Carey's lucubrations than that his panacea for the fr[illegible]bankruptcy, and other evils of which the American system of banking [illegible]he prolific source, is neither more nor less than the repeal of all restri[illegible]ns, of whatever kind, on the formation and management of banks! After this it is not, perhaps, too much to expect that Mr. Carey may favour us with an essay, showing that all restrictions on the issue of coins, weights, and measures, should also be repealed. In the mean time, howev[illegible], we may state, that it is completely in the power of the Americans, if t[illegible]y are so disposed, to adopt measures effectually to insure the payment of notes by the issuers, and the equality of their value. And it is some consolation to know, that till they do this, their banking system will be ten times more injurious to themselves than to those who may deal with them.

"'Banks, Banking, and Paper Currency, by R. Hildreth, 8vo., 1840.'

"A feeble apology for the worst parts of the American banking system.

"'The Theory of Money and Banks Investigated, by George Tucker, of Virginia, 8vo., 1839.'

"A respectable work, but the proposals of the author, even if they were adopted, would do little, if any thing, to obviate the scandalous abuses in the banking system of the United States. He does not propose taking security from the issuers of notes, though it has been shown, over and over again, that where private parties and associations are permitted to issue notes, nothing short of this can be of any material service. The various regulations that have been enacted in the United States, ordering banks to have a certain portion of their capital paid up before they commence business, to publish returns of their assets and obligations, to submit their books to the examination of public inspectors, &c., have all been found, in fact, worse than worthless. Such regulations cannot be enforced; so that their real effect is, by giving an appearance of credit and respectability to the worst description of banks, to lull suspicion, and facilitate fraud.

"But the State Legislatures may compel all banks that issue notes to give full security for their payment. A regulation of this sort may be easily made effectual. And if the Americans have any wish to put down swindling, and to give that solidity and respectability to their banks, of which they are at present so entirely destitute, they will make haste to adopt and enforce it.

"'Progress of the United States in Population and Wealth in fifty years, as exhibited by the Decennial Census, by George Tucker, of Virginia, 8vo., 1843.'

"This work exhibits the censuses of the United States, taken in 1790, 1800, 1810, 1820, 1830 and 1840, and their results, as respects the progress of the population, and its distribution according to age, size, race, &c. It also contains the statements obtained under the last census of the annual produce of the various branches of industry carried on in the different States, with the amount of capital, and the number of hands engaged in each. But it is needless to add, that returns of this description can have no pretensions to any thing like accuracy; and we doubt whether, under such circumstances, it would not be better to dispense with them altogether. Theories founded upon, or inferences deduced from such slippery data, must necessarily be worth little or nothing.

"'Report of the Secretary (General Hamilton) of the United States, on the subject of Manufactures, presented to the House of Representatives on the 5th December, 1791, 8vo.—reprinted, London, 1793.'

"This is a well drawn up *resume*, of the arguments in favour of the mistaken policy of encouraging manufactures, applied to the case of America. But without taking up the time of the reader by entering into any detailed exposition of their sophistry and fallacy, we may shortly observe, that it would have been well for the United States had they rejected General Hamilton's advice, and left manufactures to grow up in the Union as they would have done, without any artificial encouragement, according as the circumstances of the country enabled them to be carried on with advantage. All that she has realized by her attempts prematurely to stimulate their growth, has been a heavy loss. She has forced, by her ill-judged policy, a large portion of her capital and industry into employments which cannot be carried on without laying heavy duties on the products of similar employments when imported from abroad; that is, without imposing a heavy tax upon her own people! It would not be difficult to show that America expends at present from ten to twelve millions sterling a year in protection to her manufactures, exclusive of the injury this policy inflicts on her agriculture and trade! And it is impossible to show that she has gained a single real advantage by this heavy sacrifice. Indeed, all those manufactures for which the country is adapted, and which may be carried on without loss to the public, are injured by the protective system."

And this is Mr. M'Culloch's criticism, if criticism it may be called, upon Secretary Hamilton's justly celebrated and truly valuable report. We do not know that we ever before saw strung together, in so short a space, so many one-sided and erroneous assertions. We respectfully ask the writer, or any of his admirers, and advocates of the free-trade system, to supply us with the arguments by which they have convinced themselves of the truth of what is here stated. We should like much to see the process of reasoning by which a strong-minded, clear-headed, and well-informed man like Mr. M'Culloch, has arrived at what appears to us to be so false a conclusion. There is something very peculiar either in his idiosyncrasy or our own.

"'Observations concerning the Increase of Mankind, Peopling of Countries, &c., by Benjamin Franklin, 8vo., 1751;' and since frequently reprinted.

"This short essay is an excellent specimen of the penetrating sagacity, and compressed and clear style, for which its eminent author was so remarkable. The circumstances on which the increase and diminution of population depend, are succintly and accurately stated."

Mr. M'Culloch then subjoins a very considerable portion of this "remarkable tract." He thus concludes his notice of it.

"Dr. Franklin's conjecture that the million of whites in America in 1750, when the above tract was written, would in a century thereafter, or in 1850, exceed the number of people in England, how extravagant soever it may have appeared at the time, would have turned out to be perfectly well founded, but for the extraordinary and unlooked for increase that has taken place in the numbers of the latter. And even with this increase it is but little, if any thing, wide of the mark; the white population of the United States having amounted in 1840 to 14,189,555, while that of England and Wales amounted in 1841 to 15,911,725. But it is next to certain that the white population of the United States will exceed that of England in 1850, and the fair presumption is, that in 1860 it will very materially exceed the population of Great Britain, which in 1841, amounted to 18,532,335. The total population of the United States, including slaves and free coloured persons, did not, in 1750, exceed 1,300,000, whereas in 1840 it had increased to 17,069,453.

"It is impossible, however, to foretell, from the rate at which population has increased in any country, how it will continue to increase, seeing that this depends wholly, or almost wholly, on the facility with which food and other accommodations may be supplied. It is, however, sufficiently established that, had it not been for the facilities the Americans have had of spreading themselves over the vast and fertile valley of the Mississippi, their former progress in population would have been already very materially checked. But considering the immense extent of fertile and hitherto all but unoccupied land to the west of the Mississippi, it seems not unreasonable to suppose that the present rate of increase may be maintained for the next fifty or sixty years; and if so, the population, including slaves, would, according to Mr. Tucker, amount in the year 1900 to about 74,000,000! And gigantic as this may seem, there is really nothing in the estimate to make one suppose that it may not be fully realized.

"'Essay on the Rate of Wages," by H. L. Carey, 8vo., 1835, is mentioned by its title only, with reference to other works by the same author, which had been previously noticed.

"An Essay on the Nature and Principles of Public Credit," by Mr. S. Gale of Charleston, South Carolina, which was printed in 8vo. in London, 1784, is also mentioned, but without any comment.

The only publications relating to the Post Office, Post Roads, or any subject of the same class, are the following:

"Origine des Portes chez les Anciens et chez les Modernes, par M. de Neuville, 1 vol. 12mo., Paris, 1708," on which no comment is made; and

"Post Office Reform, its importance and practicability," by Rowland Hill, 8vo., 1837.

Respecting the Penny Postage system, Mr. M'Culloch seems to have an opinion, that although a reduction of the rates of postage was indispensable, they ought not to have been placed so low as to cause any absolute loss to government. He says that "although a very large increase has taken place, under this system, in the number of letters and parcels conveyed by post, it may be doubted whether there has been any material increase of correspondence." This appears to involve a contradiction.

Cheap postage appears to be one of the things which our author "damns with faint praise."

We must here close our account of this very useful book. We differ most *essentially*, and *diametrically*, with its industrious and talented author, upon many of the subjects which he has herein alluded to, but sincerely thank him for its preparation and publication.

PRISON STATISTICS.

PRISON ASSOCIATION OF THE CITY OF NEW YORK.

Crime, prison discipline, and criminal jurisprudence, are so closely and intimately connected that we seldom find them treated separately.

There is a spirit of inquiry and research abroad respecting them, which it is to be hoped, may result in some practical benefit on the really interesting subject of lessening crime.

We have for some time been in possession of the first Report of the Prison Association of New York, and should have before noticed it, had we not felt a reluctance to introduce the subject into our early numbers.

The vices of society are at all times unpleasant themes for discussion, and nothing but the desire to abate them, and the benefit which may arise from investigating into their nature, causes, and extent, can justify the appearance of their details in a periodical.

This city, and indeed this State, are peculiarly situate as it regards crime. Over and above the common liability to crime which exists in large cities, New York, from its position as the great turnpike gate, or in more modern phrase the railway station, connecting the western with the eastern hemisphere, must necessarily exceed all other districts in the Union in its criminal statistics.

Still it is consolatory to know that great as our disadvantages in this respect are, there is no increase of crime corresponding to the increase of population, and further, that one-fourth of the criminals are foreigners.

According to a statement made by J. W. Edmonds, Esq., at the meeting of citizens called in November last, the average annual convictions in this State for six years prior to 1837, were 1,455; while the number for the last four years had averaged 1,484, an increase of only two per cent., during a period when the population increased twenty-five per cent. The following were stated as the averages in ten States: in Maine the average number of convicts for thirteen years prior to 1837, was 80; for the last two years it has been 54. Crime has there diminished one-quarter, while population has increased 25 per cent.

In Vermont, the average number for twenty-five years prior to 1837, was 100; for the last two years, it was 69; showing a diminution of one-third, while population increased twenty per cent. in ten years.

In New Hampshire, the average for ten years prior to 1837, was 73; for the last four years it has been 88, being an increase of one-fifth, or about equal to the increase of population.

In Massachusetts, the average for ten years prior to 1827, was 298; for the last four years 301, scarcely an increase, while the population increased 18 per cent.

In Connecticut, the increase was about commensurate with the growth of population. The average for nine years prior to 1838 having been 191, and for the last three years 206.

In New Jersey, where the population has doubled in forty years, the progress of crime has been as follows: in 1838, 163 convictions; in 1839, 160; in 1840, 152; in 1841, 151; in 1842, 137; in 1843, 155.

In the eastern district of Pennsylvania, the average number of convicts for 1836 to 1842, was 387; for the last three years it was 345, and its population had increased one-third in ten years.

In Maryland, the average for five years to 1838, was 381; for the last four years 297, and the population has increased one-eighth, in ten years. A part of this diminution was doubtless owing to a recent law, which allowed a certain class of convicts to be sold into slavery.

In Virginia, the average for the last forty-three years has been 55; for ten years prior to 1823 it was 72; for the last year, 52. Population increased twenty-five per cent. in ten years.

Compared with the statistics of crime in Europe, these statements show a consolatory result.

For if from the 1,484 convictions of last year, we deduct the 25 per cent. for foreign criminals, we shall have but 1,091 Americans, as convicted criminals in this State, which, though sufficiently to be deplored, nevertheless shows a very different state of things from what is seen on the eastern side of the Atlantic.

For in Ireland, during a period of thirty-six years from 1805 to 1841, the convictions for crime swelled up from an average of 3,600 per annum to the enormous amount of 20,796, making an increase of 600 per cent. in that time.

So in Scotland, during a period of twenty-two years from 1820 to 1842, the annual average of convicts was 1,486, while it has increased to 3,884, being an augmentation of more than 100 per cent., while population in the same space of time only increased 50 per cent.

In England the number of persons arrested and confined in prison for crimes was as follows:

In 1836,.......... ...	78,345 males.	20,782 females.	Total, 99,127
1837,..............	85,695 "	24,400 "	" 110,095
1838,..............	86,485 "	23,227 "	" 109,712
1842,..............	110,792 "	28,596 "	" 139,388

So that during seven years there was a regular increase, equal to 40 per cent., and extending to the awful degree of one in almost every 100 of the population. And of those that were arrested in 1842, there were convicted, exclusive of violations of the game laws, 87,299, or nearly one in every 160 inhabitants.

We have no means of making this comparison complete, for we have not yet adopted in this State a perfect system of prison statistics—but we have advanced so far that we can approximate to a right conclusion. Thus, in England, the convictions in 1842, for henious crimes—such as in our State are punished by confinement in the State prisons—amounted to 31,309, or one in every 450 of her people; while in New York the convictions for similar offences in 1842 were 1,291, or one in 1,808 of the population. In 1830, the convictions were one in every 1,811 of the population, and during the ten years from 1830 to 1840 our population had increased 510,313, *and of the number thus convicted in* 1842 *in this State* 350, *or more than one-fourth of the whole number, were of foreign birth.*

The comparison can be carried still further. In England, 33,862, or nearly one-quarter of the whole number who were arrested and convicted for crime in 1842, were recommittals, being about one in 424 of population; while in this State, during the same year, the number of recommittals was only one in every 5,300 inhabitants.

Without yielding to the temptation to stop and congratulate ourselves and our country, upon this more favourable state of things with us, we may be allowed to pause a moment, and ask, as pertinent to the matter in hand—what has produced this great difference?

Making all due allowance for the improved state of the English police, confined as it is to but a limited number of places, and also for the peculiarly penal character of the game laws, we shall find that the difference in our favour is in a great degree to be ascribed to temperance, education, and our penitentiary system.

This is not the place to discuss the progress of temperance reform, but no man can deny that it has, in this country, been indeed efficacious in arresting the progress of crime.

And as to education, one fact tells the whole story: of the 139,388 arrested in England in 1842, 39,566, or nearly one-third, could not read; while of all prisoners at Sing Sing, in this State, one-eighth only could not read; and of the whole number of convictions in this State in 1841, one-sixth could not read; but, beyond all doubt, the great agent which has been at work to produce these results, has been the mild, the humane, and the just spirit which has been infused into the penitentiary systems of this country.

The systems existing among us are known here as the Auburn and the Pennsylvania plans, but abroad they are spoken of as the "silent system," and the "separate system." Between these two an active contest is going on, here and in other countries; but the rivalry is a glorious one. It is not a contest which shall be most successful in tormenting fallen man—most ingenious in inflicting suffering upon him—but which shall be most triumphant, by their appeals to the better principles of his nature, in leading him back to the path of virtue and reform.

Two societies now exist in this country advocating these different plans. The Boston Prison Discipline Society has lately issued its Nineteenth Annual Report, from which valuable document many of the facts already given have been drawn; and that society has worked a great good in this matter, both here and abroad. The Philadelphia Prison Society has existed, with a brief intermission during the Revolutionary War, since 1776, and the interest they feel is manifested by the fact that a delegation from them is now present, heartily co-operating with us, and welcoming us as co-labourers with them.

So much for this valuable report, and the very excellent remarks of Judge Edmonds. Nothing can be more proper than such a society, and we think it is in good hands. Doubtless the principle is a sound one, that to reclaim a mind which has become degraded by crime, sympathy is a very important ingredient, and we most cordially wish every success to the philanthropic gentlemen who have formed themselves into this prison association; their labours will be very useful, and we shall be very happy to hear from them again.

We cannot, however, dismiss this very important subject, without modestly offering a few views of our own. We have thought much upon this subject of crime and its origin, and we cannot dispossess ourselves of the idea that a society for the prevention of crime would find ample and useful employment, and would, in the end, tend very much to lessen the labours of the truly benevolent and valuable society whose report we have in part given.

From some considerable observation the Editor can honestly say, he is thoroughly convinced no trite maxim is more founded in truth than the one which makes idleness the greatest source of crime. If we could have houses of industry in sufficient numbers to give employment to the idle, we should attack the evil at the root. However desirable it may be to reform convicts—and no one more than the writer feels the Christian obligation under which we are individually and collectively bound to do this by every means in our power—still we must urge that it is much less expensive, and a far easier task, to prevent crime, than to reform criminals. We have in this city as regular schools for crime as for any other calling or profession, and until these are discontinued, we shall in vain endeavour to lessen crime to any great extent.

Children are regularly trained by some parents to the profession of stealing, as others train theirs to a laudable business; and when the former are caught and brought to trial, they are sent to the house of refuge, where every care is taken for their education and reform; while those who are so far honest, are left in wretchedness, to be corrupted by every species of bad example. A. is regularly educated to vice, while B., of more fortunate birth and parentage, is educated to virtue; the former becomes the culprit by carrying out the principles of his education, while the latter sits in judgement upon his less fortunate fellow-creature, who is condemned to the State prison for doing precisely what his judge has done, namely, as we have said, carrying out the principles of *his* education.

But we are extending our remarks much further than we intended, and must bring this article to a close, though not the subject on which it treats, for we consider it one of the most important that can occupy our pages, that of the prevention of crime; and we are well satisfied a much less amount of expense and of Christian labour than will be required to reform criminals, if expended and bestowed to educate in a proper manner the rising generation, and find them something to do when they become responsible and moral agents—a much less expense and labour, will be ten times more effectual in preserving them from crime, than in attempting to restore and reform criminals While we wish it distinctly understood, we have every sympathetic feeling with those who may embark in this last very laudable and Christian enterprise.

Industry is the parent of many virtues, while idleness will be found to be the great source from which are derived the inmates of our houses of refuge, penitentiaries, and State prisons. We set them to work, as soon as they are convicted of crime; why not do this while they are yet innocent, or at all events not degraded beings?

FAIR OF THE AMERICAN INSTITUTE.

THE Eighteenth Annual Fair of the American Institute, pursuant to the announcement made in our August number, was opened on Monday, the 6th inst., at Niblo's Garden, at 12 o'clock, M. It was very much our wish to have been enabled to give at this time the official account of this great exhibition of the fruits of American skill and industry, but the necessity of going to press with our November number before the account could be prepared has deprived us of that pleasure.

We can therefore only state, in general terms, that it has been a highly gratifying occasion. An occasion which has called forth a vast amount of patriotic feeling. Indeed there is scarcely any sentiment which is honourable to the human heart, and calculated to make of us better citizens and better Christians, than those which are propagated and promulgated by these annual exhibitions of the products of nature and of art, for which we are indebted to the untiring exertions of the American Institute.

First in order, as the oldest and most extensive employment of the human race, comes agriculture, than which no calling is more honourable or more ennobling. The history of mankind, from the earliest ages, shows that nothing more strongly marks his essential improvement than the advancement in agriculture and its invariable attendant, horticulture. And to these two ennobling and refining pursuits the Institute has devoted a large portion of its useful labours.

We see now, announced in the newspapers from all parts of the Union, notices of the establishment of agricultural societies and farmers' clubs. It requires no great extent of memory to trace the period, but a very few years since, when such things were few in number and weak in purpose, while we are most happy to believe they are at the present time not only numerous, but that they are gradually acquiring a strength and influence, from which we may look for the most happy effects. Let the knowledge that agriculture and horticulture are now more than ever calling science to their aid, once pervade our country and wake up our farmers to the application of it in every department of their noble calling, and we shall soon see its happy results in every part of our social and political economy. Instead of estimating farms by their extent, we shall soon find quantity of acres, giving way to quality and amount of produce. This will early be followed by a laudable pride, which will lead to neatness, and end in a much greater attachment to the soil, and higher and purer national feelings.

Let a scientific education, be considered as essential to the farmer, and it will not be long before we may look for vast improvement in those who represent us in our legislative halls. But we have not space for a fourth part of what we have to say on this engrossing subject, nor is this the place to indulge our feelings, if space were abundant. We have been led into this vein from the delight we feel at what has already been accomplished in this department of our national welfare; and we think throughout the whole country, from the Gulf of Mexico to that of the St. Lawrence, and from the Atlantic Ocean to the farthest West, the influence of the American Institute has been felt as the pioneer in this great work.

Well, indeed, may the advocates of agricultural improvement, and the friends of American skill and genius in the useful and ornamental arts, be members of the same Institution, for agriculture and the arts are, from their very nature, inseparable. No plough could ever have turned a furrow, till the miner, the refiner, and the blacksmith, had moulded the share from the great master of metals. Nor could the swath of grass, or the cereal crops which minister to the wants of animal life, have been gathered till art had touched the crude iron with its talismanic power, and given to it the shape of the sickle and the scythe.

But it is needless to pursue the close connexion that exists between agriculture and the arts; it is too obvious to require elucidation. Every farmer must have long since discovered that the best friend and customer for him is his neighbour, the manufacturer, who clothes him with the wool of his own sheep, made into cloth by labour which he feeds; thus avoiding all expense in the exchange which would accrue between a farmer on this side, and a manufacturer on the other side of the Atlantic. In vain would the advocate of free trade attempt to persuade an intelligent farmer, that price has any thing to do with his prosperity, if foreign wool and foreign labour are to be used; for well he knows, that to substitute these two ingredients from abroad for those which he has to sell at home, and no possible reduction in price could compensate him for the loss of the market for his wool and his grain—which latter he also knows is excluded from Europe.

It is natural enough, therefore, that the American Institute should combine the advancement of agriculture and horticulture, with every other American interest, and that thus these fairs should be rendered doubly useful. We have been more than usually struck with the advantages of these annual exhibitions this year, from having paid more attention to the addresses that have been occasionally made—many of which are highly interesting; and gladly would we transfer them entire to our pages, but that they are too copious for our space; and we fear we shall hardly do them justice in the few passages we have selected as forcibly illustrating the objects which called them forth.

The first in order of time is the address of Henry Meigs, Esq., on Agriculture and Horticulture, delivered in the church of the Messiah, on Tuesday, October 9th. It appeared that the Hon. George Lunt, of Newburyport, was prevented by indisposition from the performance of a promise he had given to make an address before the Agricultural Convention then held, and that Mr. Meigs had kindly consented to take his place; and ably did he perform the task which had thus suddenly devolved upon him. We select the following extract as highly interesting:

> LADIES AND GENTLEMEN: Let me begin by borrowing from the greatest man that ever lived, from our own dearly beloved Washington, his opinion of the agricultural cause; an opinion among the very last communicated to his fellow-men. That opinion, contained in his message to Congress in 1796, was, That the Government of this Republic should then establish a separate Department for Agriculture; that the purse of the nation should be freely employed in the cause. He entreated Congress to establish a *Home Department for Agriculture.* The American Institute is now, and has been for some time past, engaged in awakening the vast farming interest of this country to the fulfilment of *Washington's wish.*
>
> He knew, and all great men know, that the cultivation of the earth is our very first and our most delightful duty. *That Paradise lost by transgression* can only *be regained here on earth* by the sweat of our brows, in clearing away thorns and briars, and causing our valleys to show forth their golden harvests, and our gardens to blossom with roses. All savage life is without agriculture, worth any notice. All *semi-wild* existence is without a garden. By due care and exercise of intelligence, animals of a wild nature are subdued to domestic habits. Man, in the pride of his high standing, *as one created in the likeness of God,* is capable of subduing all things on earth to his own uses. He flies on the back of the horse. He rides the enormous elephant in triumph. He makes the little ox of former ages, weighing not more than three or four hundred pounds, weigh *five thousand.* He will now get from *one acre a thousand bushels* of valuable roots. He makes the desert soils become cultivable fields and gardens! He will have the earth bear a thousand happy beings where it bore but one unenlightened savage! He will now travel through his farms and gardens at the speed of forty miles an hour, and he prints the *Holy Book by millions on millions, by the same steam power by which he flies!* Happy are we to be in this period of time, when the *temple of Janus is truly closed;* and when *those of the Almighty* are hourly rising from the ground, all through the civilized world, and unfolding their portals to a happier race.

No man ever wrought in the field or garden with his own hands, without becoming *more or less purified by the work.* God has commanded it, and he has blessed it. In all that man does, except in the farm and garden, remember that he can, if he will, *commit forgery. But in these he must be true.* He has no art, no magic by which he can *simulate a flower, a grain of wheat, or an ox!* Be the evil spirit in him what it may, in all these great productions of Almighty power, as the agent of that power he is *compelled to be true.* Nature will not obey the evil spirit, and enable him to tell you a falsehood in these things. The very man who will sell you *chalk and water for milk,* cannot sell you *rye for wheat, a violet for a rose, or a sheep for an ox!*

Call up from the records of men those names which cannot die, and you will find them all of one mind as to the culture of the earth. What is the rule of that venerable empire at our antipodes: Chinese emperors have been always bound, by a custom of several thousand years, to appear in the field at the opening of every spring, and in the presence of the first men of the empire, *take hold of the plough* and *run the first furrow!*

Cato of Rome always cried aloud to the Romans, Go to your fields and work them with as much energy as you would meet the enemy in battle! The most beautiful poet of ancient days, Virgil, wrote two works that will never die. One on the management of stock, his *Bucolics,* (meaning care of cattle)—the other the *Georgics, agriculture.*

At the era of Virgil, Rome had attained by her power the command of an hundred millions of men. That was the *memorable Augustan age!* the real acme of Roman glory. Thus you perceive that the beloved poet of the day, the truly admirable *Maro,* devoted his rich mind first to the *raising of cattle!* secondly to *Georgics,* or agriculture; and lastly to the History of Rome's infancy and father Æneas.

Such then was the imperial taste of Rome. She had, by following the just and noble precepts of Cincinnatus, Cato, Virgil, Varro, Columella, of Theophrastus of Athens, and others of natures's noblemen, *established virtue* in her people. Virgil states the maxims of *Much cattle much wheat! Cull from your seeds and fruit always the very best. Spare not your sturdy labour upon the soil.* Italy can be forever maintained as a garden by *manure of much cattle,* and by constant labour. *Steep the seeds* of your plants in *nitre* and the *lees of oil.*

The next address in the order of time is one delivered at Niblo's, by Professor James J. Mapes.

We would that our space permitted our insertion of the whole of this address, which shows forth with no more than justice the great, and national benefits of the Institute.

The Professor converts them into figures and reduces them to a pecuniary standard, and in his zeal may, in the opinion of some, have overrated them. However this may be, we by no means consider this estimate, even if short of the amount of pecuniary benefit conferred, as in any degree to be compared with the more exalted and enduring advantage of scientific and intellectual improvement resulting from their labours, which every day's experience shows to be spreading far and wide, throughout the land.

We therefore cheerfully place on record the following extract from the Professor's address:

ADDRESS.

The question has been occasionally asked, by those inimical to our institution, What has the American Institute done? what benefits have the public received from it? &c.

It would be much more difficult to say what it *has not done,* than to answer these questions.

The American Institute is composed of the largest association of philanthropists of any institution in our country, and their labours for the public benefit have been most untiring.

After eighteen years of active industry, it has established correspondence with every State and county in this Union. Its services to the agriculturists are freely admitted by every farmer from Maine to Georgia. The agricultural department of our Institute holds yearly conventions, bringing together the results of agricultural experiments from every section of the country, and more queries and enigmas have been definitely settled by it, than by all other sources for disseminating practical knowledge in this important branch of industry. Our Repository is the receptacle of seeds from all parts of the world, sent there by philanthropical individuals for distribution, and the results of the best modes of culture ascertained by our friends, are disseminated for the public benefit.

On the first and third Tuesdays of each month the Farmers' Club holds its meetings at the rooms of the Institute; and at these meetings practical farmers present specimens of products, and describe modes of culture. Their remarks are eagerly caught up by the reporters of the various agricultural papers throughout the country; and thus all the improvements of the experimental farmers in the neighbourhood of New York are published for the use of the farmer.

It is well known that many of the fine lands of Virginia, and other parts of the southern country, have been thought to be *worn out;* but our Farmers' Club has clearly established the fact, that it is only the surface that has been exhausted; and that by deep ploughing, and light manuring alone, most of these lands may be again rendered available. These hints have been put in practice, and many lands which could have been purchased a few years since for $5 or $10 per acre, are now worth from $40 to $100 per acre. This practice of deep ploughing is now restoring the miscalled worn-out lands of Virginia to luxuriant and profitable farms. The Agricultural Society of this State was first proposed at our agricultural convention, and the chairman of our Board of Agriculture, Gen. Jeremiah Johnson, advocated the cause so ably before the State Legislature, as to result in the formation of the State Society.

Our ploughing matches have also been productive of benefit. The style of plough, mode of handling, &c., are all important. Thousands of dollars are spent annually to improve the telescope, and nothing for the plough.

The exertions of the Farmers' Club, added to our exhibition, have doubled the supply of grapes in the city of New York, within the last few years; and the immense amount of grapes raised by one of our members at Croton Point, is too well known to require comment.

The horticultural exhibition at our fairs brings us friends from all parts of the Union; and the number of experimental horticulturists from the vicinity of Boston, now in this room, clearly proves the estimation in which our Institute is held by our neighbours of Massachusetts.

It cannot be doubted, that the improvements in our agricultural products, from the causes already stated, are at least one per cent. on the whole amount of the crop; and as this amount, exclusive of the tobacco, sugar, cotton and rice crops, is certainly $700,000,000 our Institute has benefited the country at large, in the department of agriculture alone, $7,000,000 per annum.

The sugar planters of Louisiana have received a still greater ratio of benefit from the exertions of some of the members of this institution, and they freely acknowledge it.

Who first proposed the geological survey of this State? The American Institute. Many of its members and our Superintending Agent, spent the greater part of a winter in Albany, and by their untiring exertions, succeeded in procuring the law authorizing this survey; thus, not only have the mineral resources of the State been made known to the public at large, but its natural history has found record before the *march of internal improvement should for ever obliterate* much of the minutiæ from the face of nature.

Our Repository furnishes statistics for the use of Congress on almost every subject connected with the public welfare.

A not less useful adjunct is our Committee on Arts and Sciences. This committee is composed of some of the most able philosophers and engineers of our country, and their labours have been productive of the greatest benefits.

Almost every invention of supposed utility is submitted to them, by the inventors, for investigation, their favourable report being deemed sufficient to authorize capitalists to invest their means in the project. These investigations are always conducted with great patience, and inventors are often prevented thereby from wasting their means in the creation of mere chimeras. Ingenious thoughts, by the advice and assistance of this committee, are rendered utilitarian; and thus the poor but ingenious mechanic is both protected and assisted in consummating his inventions. It is a well known fact, that the product to inventors of all the patent rights taken out in this country, has scarcely exceeded the amount of fees paid to the patent office for issuing the patents; and yet, in the face of such a fact, no instance can be shown where the Committee of Arts and Sciences of the American Institute has given an opinion which has afterwards proved fallacious. Their certificates, in consequence, are sought after by inventors with an eagerness which proves their value.

The necessity of a school for the Arts of Design, as applied to the Mechanic Arts, has long been felt in this country. In France the Arts of Design form a part of the common school education, and in consequence, the whole world is put under contribution for French *patterns*. The quality of our woods is better, and our workmanship equally good with the French, but the superiority of their designs enables them to sell French furniture in our markets at double the prices of our own. They send us a new pattern of calico at 75 cents per yard, which we imitate in a few weeks at 12½ cents per yard; but in these few weeks our market is supplied at a profit to the French manufacturer of many times the whole cost, and simply for the want of a school for the Arts of Design. Such a school we have organized for this winter, and many of our first artists have volunteered their services as teachers. The National Academy of Design will doubtless lend us their valuable aid in so laudable an undertaking, and the results cannot but prove beneficial to our mechanical interests.

We have next an address from H. C. Westervelt, Esq., upon American Progress, from which we with pleasure make the following extract:

AMERICAN PROGRESS.

The return of the present anniversary of the Fair of the Amerioan Institute, is a convincing proof of its stability and enterprise, and an additional evidence of its character and importance; and like the faithful steward, she presents herself before the public, adding new talents and new treasures to the numerous works of utility and enterprise, which have before grown up under her fostering care. And while articles of ingenuity and invention are rapidly springing up in every quarter of our vast republic, this noble Institute takes them by the hand, and charitably guides them to the road of competition, encouragement and success.

And although many a useful project may have been too early abandoned by the inventor for want of a proper introduction to the community, yet it cannot be said, with any appearance of truth, that here, in these exhibitions, or by any partiality of this corporation, their merits have at any time been passed over in silence or wilful neglect; but, on the contrary, every exertion is made to add strength and credit to mechanical skill and agricultural industry, and to give an impetus to the innumerable creations of domestic invention. In fact, wherever we may turn, either here or elsewhere, we have reason to feel extremely grateful for the improvement in every branch of home industry and domestic manufactures.

If we go to our colleges and schools, we find that the principles of education, and the manifold varieties of knowledge, are gradually becoming more and more developed.

Industry and enterprise obtains the ascendancy over sluggishness and error, and the way to science, once obscure and doubtful, gradually becomes more plain and simple.

Sciences are reduced to systems, and systems, in their turn, are reduced to the comprehension of the plainest understandings.

But these, like every thing else, are not properly attained unless by ceaseless labour and perseverance; and like every thing which is susceptible of an intrinsic value, they are usually worthless, without the physical and intellectual industry necessary to their accomplishment.

Genius, it is true, may sustain and enliven every thing within it sphere; but it is only where true knowledge is at the foundation, that genius proves of any real advantage to its possessor.

Thus we see that it is labour, hard labour, which is the great power which invigorates and gives an impetus to the moving principles of life.

It is labour which fills the granary of the husbandman, and affords us our daily bread. Labour speeds the plough, it enriches the soil, it improves the farm, and is the source of wealth to those who venture to approach it. Labour is the vital principle of the manufacturer, the support of the artisan, and the gold mine of the mechanic. It is the keystone to the fortune of all professions, and it exemplifies its merits in the pulpit, at the forum, and in the invalid's chamber.

Labour builds our cities, it constructs our ships, it digs our canals, it makes our railroads, and throws into the lap of commerce the accumulations of its toil and industry.

Labour hews the rough marble, and from the dull mass awakens order, symmetry and beauty. It breathes into life the artist's dream, and spreads upon the canvass the history of his fancy. It adds to our comforts, contributes to our pleasures, and is our natural friend in every situation in life.

If we take but a glance at the contents of these halls, we are made sensible of the force of industry and the pride of labour. You here perceive that to the power of human contrivance we are indebted for every luxury worthy of our enjoyment. It is here, too, we are made to realize that man, with all his weakness and with all his vanity, is yet the object of wonder, and the subject of admiration to his fellow man.

But while man has performed even more than wonders, much may yet remain to be accomplished. New discoveries may be made, and old ones may be improved upon; and although all these productions now before us may appear in the highest degree perfect—advancement, aided by industry and research, may so far progress, as to create surprise at some distant day, as to how little we formerly knew of them.

It is not unreasonable to conjecture, that the ordinary method of transportation by horses may be done away with altogether, and that the slow-moving plough may eventually leave its furrow in the field by the "go ahead" application of the steam-engine. At present, however, we have no inclination to speculate.

When Fulton successfully attained a speed to the steam-vessel of some six miles the hour, or when Trevithink attained for the locomotive about the same average, general opinion would naturally have hesitated at the lightning-like velocity which both have realized at the present day. Ingenuity and enterprise, it would seem, have nearly perfected the works of the immortal names of those who first planned, projected, and built up these noble evidences of thought, for the promotion of civilization, and the advancement of every stage of human society; but we repeat again, that much may yet remain to be accomplished.

Without disputing who did or who did not not first ascertain the advantages of steam navigation, whether we ascribe it to Fitch and Fulton at home, or to strangers abroad, it is nevertheless certain that every effort to propel vessels by steam anywhere than in the United States, had most signally failed; and it was not until Fulton turned waterman and his experiments were triumphant, that steamboats came into general use in Europe.

To such a labourer in the vineyard of American enterprise we cannot allude too favourably. In fact it is a general fault with the community as well as with individuals, to lose sight of the main spring which keeps the wheels of industry in active motion, and to forget the cause which first introduced them to vitality and usefulness.

We have had our skilful mechanics, who have given evidence of masterly ability, who have benefited what was before unimproved, and who have honoured themselves and their countrymen by the force of their enterprise; but none of these should expect, nor can they receive, that voluntary tribute of gratitude and respect which Americans universally ascribe to the great spirit of steam engines.

The brief space to which these remarks must necessarily be limited, will admit of but a cursory glance at a few of the leading facts connected with the biography of Fulton, and steam navigation.

Robert Fulton was not a man of ordinary mould, for if we deprive him of the imperishable honours with which the application of steam to floating vessels alone has invested him, there is still enough left of his merits to fulfil the career of a more than ordinary character.

It would be a source of great delight to us to give a full account of the Fair itself—to notice many of the useful and beautiful improvements, in stoves, of which there are multitudinous kinds and patterns that we have never before seen, remarkable for the economical manner in which coal may be used, both as regards mere heat, and also for cooking—of small carriages and carryalls, of ploughs of new and approved paterns, of corn-mills and corn-shellers, of brass and plated door knobs, of protection locks and almost every species of hardware—of cloths, cassimeres, flannels, and all articles of woollens and cottons for clothing, of silk and articles for wear of which silk is the material, &c., with hundreds of others of most useful and ornamental articles for domestic use.

But we are exceeding our limits, and must be content with the following detailed notice of a few articles, the perfect manufacture of which, in this country, is new, and highly important; and of a few others, abundantly proving the spirit of invention for which this country is so remarkable:

Articles of Cast Iron.

A cast iron umbrella stand.

Garden chairs and settees, of new and valuable shape.

In these articles the result is, that by the application of the art of design to the mechanic arts, the value of the iron is increased ten fold.

Wrought Iron and Steel.

Improvement in the common shop vice, by a flexible jam.

Machine for cutting saw teeth, by the action of an endless screw. Entirely new, and of great value in the saving of labour.

Surgeons' instruments and tailors' shears, splendidly made and polished, and of improved construction. These articles were till lately *imported*—they are now *exported.*

Wrought iron pipes, cocks, and valves, for conveying steam, much stronger and more durable than copper pipes, and are not broken, as are copper pipes, by difference of expansion from heat between copper and soft solder—but being all of iron, are always tight, even under the heaviest pressure.

Portable machine for boring granite for blasting, by which a hole one inch in diameter and one foot deep may be bored in granite in six minutes.

Cut Glass.

Splendid patterns of various articles of cut glass, brought from Wheeling, Virginia, better cut, and of higher refractive force, than any English flint glass of five years ago.

Girandoles and candelabras, of beautiful designs, in which the ormolu and lacker are very superiour.

Imitation of Burrein wood, by which a table top may be made at ten cents instead of one hundred dollars.

A machine for preparing and dressing hemp and flax, greatly facilitating the process, and rendering the clean article equal to any imported.

A Diaphragm Filter, which may be attached to any stop-cock, and capable of rendering Croton, Schuylkill, and other waters, free from all matters held in mechanical suspension, thus rendering them pure and healthy.

A great Telescope, being the only one ever exhibited in this city, by which the double rings of Saturn are discernible.

American Chronometers, of superiour make and finish, equal to any patent lever clock.

Torsion Clock which runs one year without winding up. The maker offered to build one for Trinity Church to run *ten* years without winding.

American silk pongees, which after having been used one year preserved their colour, without turning yellow, and wear much better than foreign.

There were, as the catalogue informs us, one thousand six hundred and forty exhibitors, and it is difficult to think of an article for domestic comfort and convenience, of which there were not many specimens; all, of course, of American fabric; while those for luxury and ornament showed an improvement in design and finish, highly creditable to the taste of those artists, who have selected for their occupations the more difficult task of rivalling the productions of the Old World in the beautiful and the ornamental.

We cannot conclude this statement of the Fair, and the general usefulness of the Institute, without a passing tribute to its worthy and distinguished President, General James Tallmadge—a gentleman, who in the many exalted stations he has filled, in our State Legislature, in Congress, and as Lieutenant Governor of the State, has ever been an uncompromising friend of American institutions; and has never hesitated, both abroad and at home, to devote his time, his money, and his talents, to their advancement—without pecuniary interest of any nature or kind whatsoever. It has been the lot of the Editor to be connected with all the American worthies who have laboured in this truly patriotic cause, from Tench Coxe to the present time; and he has no hesitation in giving it as his opinion, that to no one among them is the country more indebted for an enlightened, zealous, and unremitting support, in every manner and form, to every American interest, than to the Hon. James Tallmadge—who has never claimed any reward, but that which we feel assured he must now experience in the vast progress which has been made, and to which he has so largely contributed.

"Palmam qui meruit ferat."

CENSUS OF THE STATE OF NEW YORK.

THE Census of the State of New York, taken by the authorities of the State the present year, as far as returns have been received, furnishes the following results:

CITIES.	State Census, 1845.	U. S Census, 1840.	State Census, 1835.
1. New York,	366,785	312,710	270,089
2. Brooklyn,	59,558	36,233	24,529
3. Albany,	41,100	33,721	28,109
4. Buffalo,	28,346	18,213	15,661
5. Rochester,	25,207	20,191	14,404
6. Troy,	21,681	19,334	16,959
7. Utica,	12,190	12,782	10,183
8. Schenectady,	6,554	6,784	6,272
9. Hudson,	5,657	5,672	5,331
	567,078	465,640	391,537

Increase of the cities of this State from 1835 to 1840— 74,103—or 19 per cent.
Do. do. do. from 1840 to 1845—101,438—or 22 per cent.

If we consider the increase of population in the cities as an index of the general prosperity of the State, the last census shows a considerable improvement in the last five years, over the five years previous to 1840, which period embraced a term during which great commercial revulsions took place throughout the country. The increase in the cities for the entire period of ten years, it will be seen, has been 175,541—or nearly 45 per cent. Some allowance should be made, probably, for the incorrect manner in which the United States Census for 1840 was taken; important errors having been noticed in the city of New York, also in Utica, &c.

The census of the towns which contain the largest villages is as follows, compared with 1840:

Towns.	1845.	1840.	Towns.	1845.	1840.
Auburn,	6,145	5,626	Rome,	5,953	5,680
Batavia,	4,317	4,219	Salina,	15,804	11,013
Corning,	2,527	1,542	†Seneca,	7,976	7,073
Greenbush,	4,182	3,701	Saratoga Springs,	4,276	3,384
Homer,	3,792	3,572	Watervliet,‡	11,209	10,141
Ithaca,	6,040	5,650	Waterloo,	3,942	3,036
Kingston,	6,410	5,824	Whitestown,	5,797	5,156
Lansingburgh,	3,982	3,330	Williamsburgh,	11,550	5,094
Lyons,	4,267	4,302			
Newburgh,	8,961	8,933	Total,	142,054	117,666
Poughkeepsie,	11,791	10,006			
*Oswegatchie,	6,414	5,719	Increase in 21 towns,		24,388
Oswego,	6,818	4,665	Do. in cities as above,		101,438
Total increase in cities and in principal towns,					125,826

* Includes Ogdensburgh. † Includes Geneva. ‡ Includes West Troy.

Counties.

The returns from 38 counties are as follows:

	1845.	1840.		1845.	1840.
Albany,	77,281	68,593	New York,	366,785	312,710
Allegany,	40,104	40,975	Niagara,	33,450	31,132
Broome,	25,808	22,338	Oneida,	84,766	85,310
Cattaraugus,	30,169	28,872	Onondaga,	70,275	67,911
Cayuga,	48,943	50,338	Ontario,	42,537	43,501
Chautauque,	46,548	47,975	Orange,	52,227	50,739
Chenango,	39,954	40,785	Oswego,	48,450	43,619
Clinton,	31,278	28,157	Queens,	31,849	30,324
Columbia,	41,976	43,252	Rensselaer,	62,328	60,259
Cortland,	25,081	24,607	Saratoga,	41,377	40,553
Delaware,	36,990	35,396	Schenectady,	16,629	17,387
Dutchess,	55,124	52,398	Schoharie,	32,488	32,358
Erie,	78,891	62,465	St. Lawrence,	62,354	56,706
Fulton,	18,579	18,049	Steuben,	52,223	46,138
Genesee,	28,845	30,043	Tioga,	22,456	20,527
Jefferson,	64,999	60,984	Tompkins,	38,151	37,948
Kings,	78,691	47,613	Ulster,	49,107	45,822
Livingston,	33,193	35,140	Westchester,	47,548	48,686
Madison,	40,887	40,008			
Monroe,	70,899	64,902		2,069,240	1,914,520
Increase in five years,					154,720

The population of the twenty-one counties to be heard from, in 1840 was 514,401:

Census of 1840.

Chemung,	20,732	Richmond,	10,965
Essex,	23,634	Rockland,	11,975
Franklin,	16,518	Seneca,	24,874
Greene,	30,446	Suffolk,	32,469
Herkimer,	37,477	Sullivan,	15,629
Hamilton,	1,907	Warren,	13,422
Lewis,	17,830	Washington,	41,080
Montgomery,	35,818	Wayne,	42,057
Orleans,	25,127	Wyoming,	29,544
Otsego,	49,628	Yates,	20,444
Putnam,	12,825		
Total,			514,401

The increase in them, as they have but few large villages, will not probably exceed four per cent., which will make the total population of the State about 2,600,000; in 1840, it was 2,428,921.

The agricultural districts of the State, it will be observed, do not generally show an increase of population—the increase being confined to the cities and villages, with few exceptions. This arises in part from the emigration of the farmers to the new States and Territories of the west, while a large portion of the young men of the country flock to the cities and villages. The counties in which the principal manufactories are situated exhibit a general increase of population, viz.: Albany, New York, Kings, Dutchess, Delaware, Orange, Erie, Monroe, Oswego, Clinton, &c. Oneida and Columbia, in which are numerous important manufactories, show a small apparent decrease. In the former county we presume there has been considerable emigration from some of the agricultural towns, although the manufacturing villages have increased; while in Columbia the anti-rent troubles have probably affected the general prosperity. We think enough will appear from the census of the State, when the returns are complete, to show the great importance of manufactures to the agricultural interest, particularly in furnishing a home market for articles not suited for export to foreign countries, thereby sustaining an increasing agricultural population, and preventing a decrease both in the number of inhabitants and the value of real estate.

AMERICAN ANTHRACITE RAILWAY IRON.

We are rejoiced to know that the manufacture of Railway Iron is commenced by the "Montour Iron Company," at Danville, Pennsylvania, with anthracite coal alone.

Their works are on a very extensive scale, the proprietors have abundant capital, and are full of enterprise, so that we may look for a large supply of this much-needed article from this source.

A T-rail, eighteen feet long, weighing fifty pounds per lineal yard, manufactured by the "Montour Iron Company," at Danville, Pennsylvania, with anthracite coal alone, has been received for the Exhibition of the Franklin Institute, Philadelphia.

This is one of the first rails manufactured in America or in Europe of anthracite iron, and, so far as we can judge of the quality from an inspection of the bar, taking it into consideration also that it is pure mine iron, from the celebrated Montour's Ridge ore, without any admixture of cinder iron, we think there is every probability that it will be found to render much better service than the imported English rails. It is also a highly creditable specimen of American mechanical skill in heavy manufactures.

We congratulate Pennsylvania on this new source of wealth, which, we doubt not, in addition to supplying our own railroads, will soon become an article of export.

How far we can calculate upon a general and adequate quantity this year, for the railways in progress, we are not prepared to say. But if the true policy of *protection* is pursued, there can be but little doubt a very short period only will be necessary to meet all our own wants.

We trust the true principle will be adopted, as recommended by Thomas Chambers, Esq., in the July number of the National Magazine, namely, that those concerned in the iron trade "should give their unanimous advocacy to the bill reported to the Senate of the United States, remitting all duties on railway iron to the companies incorporated before 1842, for the term of three years. This would quiet all agitation on this subject, and would not interfere with the principle of the bill of 1842." For what is further said on this subject, we refer to page 100, of our July number.

IRON TRADE OF GREAT BRITAIN.

From the Miner's Journal, Sept. 27, 1845.

RISE IN SCOTCH IRON.

There has been a very brisk trade, during the week, in Glasgow pig iron, and the market continues animated, with an upward tendency. Sales have been made at 85 shillings net cash, which is a rise on the last quotations. At this price holders are very firm, and few appear disposed to accept it. Contracts have been offered to the makers for large quantities, at 80 shillings net cash, which price has been refused, as they demand as high as 90 shillings per ton; the price generally may be quoted at 87s. 6d. net cash, although a few small parcels may perchance be picked up at 85 shillings net cash. From the various reports of the ironmasters throughout the north, there is very little doubt but there will be a very great rise this season, not only in pig, but every description of iron, as the demand daily increases, and it is with difficulty they can produce a sufficient supply for the numerous railways now in progress, which require such large quantities, immediately, of rails, &c.

There is plenty of ore and fuel, but the one grand requisite is time to smelt and cast it.

Prices of Iron in London, Sept. 27, 1845.

Iron Bar, Wales,	£7 15 to £8 0 0
London,	8 10
Nail Rods,	£9 0 0 to £9 5 0
Hoop, Staffordshire,	11 5 0
Sheet,	12 10 0
Bars,	10 10 0
Scotch Pig, Clyde,	4 7 6

From the same.

DISCOVERY OF IRON MINES IN THE ROMAN STATES.

For some time past several experienced engineers have been making mineral researches throughout the Roman States, and their exploring has been crowned with success, as several very valuable iron mines have been discovered, that had hitherto been hid to human sight. They are represented to be of a very rich quality of ore, and will turn out highly advantageous to the speculators. There is very little doubt that gold, silver, iron, copper, lead, sulphur, and coal, exist to a great extent in this wealthy State; but enslaved as the inhabitants are, by the edicts of his Highness the Pope, they have never devoted themselves to mineral operations, and have contented themselves in the tillage of their productive fields, the cultivation of the vine, the olive, and mulberry tree for the propagation of the silkworm.

The rapid march of intellect within the last half century, throughout the whole of Italy, is the forerunner to a new era, which is certainly shortly to take place in the improvements of the habits of the Pope's States of Rome, which have hitherto been kept in a state of the most perfect ignorance by the priesthood.

Although his Highness has strictly prohibited the introduction of railways in any part of his territory, as injurious to the interests of the tyrannic power of the Church of Rome, by the propagation of liberal principles and knowledge among the people, he and all his Cardinals see that the day is fast approaching when the fetters of ignorance will be thrown off by the degraded Romans, and the clergy lose its absolutism. The introduction of railways into the Sardinian States, from Turin, to join those of the King of Naples, and to Leghorn, Genoa, Trieste, through the Lombardo-Venetian or Austrian possessions, is a fatal specimen of the progress that commerce and enterprise are making in the nineteenth century, all over, not only Europe, including barbarous and despotic Russia, but the whole world, which will be the means of causing the downfall of the bigoted institutions that have existed in Italy, Spain, and Portugal, from the earliest days of Christianity—and will be the great impetus to universal civilization, and fraternity between nations, from one end of the globe to the other, all of whom look up to the great advancement in progress.

INTERNAL IMPROVEMENTS.

CANALS IN THE UNITED STATES.

We have prepared the following table of the Canals now in operation in the United States, with the cost of the same, from the best sources of information within our reach, and although we are aware that it is not entirely full and correct, we think it will be found more complete than any similar table heretofore published. It is gratifying to find that *over four thousand miles* of canal navigation are now in operation in this country, all but a very few miles of which have been constructed within the last twenty-eight years, the Erie Canal having been commenced in the year 1817.

With regard to the benefits conferred by canals on an extensive country like ours, there cannot be much difference of opinion among intelligent people; nor is it essential for our present purpose to consider whether railroads are not better than canals, nor whether the latter have not always proved profitable investments for States, individuals, or incorporated companies. It is sufficient to know, as we do, that the prosperity of the country has been greatly advanced by canals—and that the additional value to real estate, as well as the facilities to market for the agriculturists and manufacturers of the interior, are considerations of far greater weight than the payments of dividends on the stocks created by States or incorporated companies for the purposes of these national improvements.

We have also prepared a table of railroads now in operation in the United States, which we find to exceed 4,600 miles, and the total cost is about one hundred and ten millions of dollars. This table we will endeavour to present in as complete a form as practicable in our next number.

Canals in the United States.

STATES.	CANALS.	Length, in miles.	Cost.
Maine,	Cumberland and Oxford,	20½	$250,000
Massachusetts,	Middlesex,	27	528,000
Connecticut & Massachusetts,	Farmington,	78	1,500,000
Massachusetts and R. Island,	Blackstone,	45	600,000
New York,	Erie	364	19,792,641
Do.	Champlain,	64	1,257,604
Do.	" Feeder,	13	
Do.	Oswego,	38	565,437
Do.	Cayuga and Seneca,	23	237,000
Do.	Chemung (and Feeder,)	39	684,600
Do.	Crooked Lake,	8	156,777
Do.	Chenango,	97	2,420,000
Do.	Genesee Valley,	52	1,400,135
Do.	Oneida Lake,	8	119,276
Do.	Delaware and Hudson,	108	2,406,978
New Jersey,	Delaware and Raritan,	43	2,900,000
Do.	Morris,	101	4,000,000
Pennsylvania,	Delaware Division,	60	1,238,027
Do.	Eastern Division,	44½	1,734,958
Do.	Susquehanna Division,	39	1,039,256
Do.	Juniata Division,	127½	3,437,334
Do.	West Branch,	73	1,708,579
Do.	North Branch,	72½	2,089,072
Do.	Western Division,	105	2,823,192
Do.	French Creek Feeder,	27	441,455
Do.	Franklin Line,	22	442,558
Do.	Erie and Beaver,	136	4,000,000
Do.	Wiconisco,	12	400,000
Do.	Bald Eagle,	25	225,000
Do.	Tide Water,	45	3,400,000
Do.	Conestoga,	18	190,073
Do.	Codorus,	11	100,000
Do.	Union,	82	2,994,423
Do.	Schuylkill,	108	3,466,020
Do.	Lehigh,	47	1,558,000
Delaware,	Chesapeake and Delaware,	13½	2,250,000
Maryland,	Chesapeake and Ohio,	184	12,370,470
Virginia,	James River,	148	5,000,000
Virginia and North Carolina,	Dismal Swamp,	23	879,864
South Carolina,	Santee,	22	650,667
Georgia,	Savannah and Ogeechee,	16	165,000
Alabama,	Huntsville,	16	100,000
Kentucky,	Kentucky River Navigation,	100	3,000,000
Do.	Licking River Navigation,	94	
Do.	Green River Navigation,	190	
Do.	Barren River Navigation,	100	
Ohio,	Ohio Canal and Branches,	333	4,694,374
Do.	Miami Canal and Branches,	211	4,137,552
Do.	Wabash and Erie, (in Ohio,)	89	2,440,000
Do.	Hocking Valley	56	899,847
Do.	Walhonding,	24	580,988
Do.	Muskingum Improvement,	90	1,374,006
Do.	Pennsylvania and Ohio,	86	1,260,000
Do.	White Water and Cincinnati,	70	1,000,000
Do.	Milan,	10	25,000
Indiana,	Wabash and Erie, (in Indiana,)	144	3,000,000
Total,		4,102	$113,934,163

A GLANCE AT THE OLD WORLD.

The arrival of the Hibernia puts us in possession of the Foreign Periodicals of the last month, and we have again the pleasure of noticing their most interesting items of intelligence in relation to the Fine Arts, Literature and Science.

SCIENTIFIC.

One of the latest novelties in Science is the attempt of Mr. Henry Hennessey, to apply photography to the registering the variations of the thermometer and barometer. The mechanical contrivances hitherto in use have not effected their purposes to the satisfaction of the learned. He has succeeded in obtaining, on photographic paper, a defined curve, expressing the changes of temperature in a thermometer. We find a similar contrivance described by Mr. Ponton in a communication to the Scottish Society of Arts. It is a neat and useful invention.

The President of the Royal Astronomical Society, London, has received an interesting letter from a gentleman at the Cape of Good Hope, in relation to its meteorology. Some curious facts are mentioned as to the observations made between the signal stations, from the Winterhockberg Mountain, 6,500 feet high, sixty miles from the sea. A theodolite telescope, aperture two inches, power twenty-five, has shown a pile of rough stones twelve feet high, twelve feet base, and three feet diameter at the apex, at the distance of seventy miles, on the Cedar Mountains.

We perceive that the Edinburgh Philosophical Journal for the last month contains the concluding portion of the able article of the late Dr. Forry of this city, on the distribution of heat over the globe, and of the climatic features peculiar to the United States. This is, we trust, to be presented in a more permanent shape, at least to the American public. The learning, the patience, the research, and the talents of the author, are apparent throughout these articles. One strong point appears to be made, viz: that there is a fallacy in attributing the mild climate of Europe to the influence of agricultural improvement, and that the diverse climatic phenomena on the same parallels, find their explanation in the local influences of physical geography. We believe this is the opinion, in a great measure, of Malte Brun, at least so far as it explains the position of vegetable productions.

Professor Pictet, of Geneva, hitherto celebrated as an Entomologist, has published a treatise on Palæontology, which is pronounced a *chef d'œuvre*. The natural history of fossil animals is, in fact, the history of epochs zoologically considered. As the public mind is much interested just now in the subject of fossil remains, and we have recently been called on to witness the Hydrarchos of Alabama on the one hand, and the Mastodon of Newburgh on the other, an outline of the plan of Professor Pictet may just now be acceptable. First, he treats of the history of the science of Palæontology itself; next, he treats of the nature of fossils, and the manner in which they have been deposited; then we have a classification of formations, the distribution of fossils in the various formations, the succession of animals at the surface of the globe, and an exposition of the zoological principles of the classification of fossils. The first volume of his work also contains a history of the Mammifera. The second volume contains the history of reptiles and fishes, and a commencement of the history of the Mollusca.

It may not be amiss to state, that the Hydrarchos exhibited in this city by Dr. Koch, though vouched for by Professor Silliman and other eminent men, has been doubted by others. The London Literary Gazette complains of the exaggeration of the Missourium, when it was first set up in London, and rather doubts the authenticity of the Hydrarchos.

We find in this Magazine, an interesting paper on the Railways of Belgium, from the pen of John Anderson. He has ascertained that the coke used for the consumption of the locomotives is manufactured at six different places, costing from 17s. to £1 7s. 6d. per ton. The amount consumed per mile in 1841, was estimated at 70 to 80 lbs. The average rate of travelling is twenty miles per hour. We have also an interesting map, showing the various gradients of the railway lines.

Professor Agassiz has published a valuable article on fossil fishes. We learn that there is such a diversity in the crania of fish, that comparative craniology in that department of nature does not exist. No one can tell at first sight whether a cranium belongs to a Percoid, Sparoid, or Chetodontal type.

We find this number of the Magazine particularly rich in papers on fossil remains, and scientific subjects generally.

We understand a geological survey of Canada has been determined upon.

Mr. De la Haye proposes to construct sub-marine railways to pass through wrought iron tunnels.

The great steam machine for draining the Lake of Haarlem has been found completely successful. In five successive hours it removed three hundred cubic ells of water.

A new anti-friction metal, to be used in the place of brass, has been invented in France. It is attended with an economy in the use of oil equal to 75 per cent. gain from the old method.

The last number of the Magazine of Natural History, contains a number of interesting articles. We find one, descriptive of the singular species of monkeys called the howlers, by Mr. Gray; another, of a new species of birds from Malacca, or apparently a new species, nineteen in number. Some new diurnal Lepidoptera, have also been described by Mr. Doubleday, in the British Museum.

Copper mines of great value have been discovered in South Australia. The mine of Kassuada is very rich, and within twelve months four hundred tons of this metal have been there obtained. Three other mines are also worked in that country with considerable profit.

A naturalist named Matteuci, has sent a paper to the Paris Academy of Science, demonstrating that the electrical discharge from the Torpedo, proceeds from a particular part of the body between the back and the belly of the animal, and not from all parts of it as has hitherto been supposed.

The disease of the potato is receiving much attention from the same learned association.

Electrical lights for mines have been obtained, being incandescent cones of charcoal in small glass globes.

It has been hitherto supposed the limits of animal life in the ocean were three hundred fathoms. A writer of the name of Hooker, has stated that during the Antartic Expedition of Capt. Ross, living specimens of Annelidæ, Echinus, (the spines three inches in length) and several corals, were obtained at the depth of 400 fathoms, in latitude 33 deg. 32 S.

Remains of infusoria were found at the bottom of the Antartic Ocean, in the mud, resembling what is called the "fossil powder," found in the neighbourhood of New York. We quote, in relation to them, a beautiful remark of Professor Owen: "These minute infusory animacules are the wakeful members of nature's invisible police, everywhere ready to arrest the fugitive organized particles which are suspended in water, and to turn them back into the ascending stream of animal life."

Willkomm, whose botanical researches in Spain we have occasionally noticed, has furnished the world with additional interesting observations. As illustrative of the character of the climate of Spain, he speaks of seeing on the first of December last, while on his way to Seville from Malaga, the cornfields of the most beautiful green color, and the almond trees in blossom. In the summer, at Seville, a suffocating heat prevails. The collections thus far made by this botanist, show that the Spanish Flora are rare and beautiful.

We find an interesting article in the same, on the officinal species of pepper, by M. Miguel. We regret we cannot insert the whole article, as it affords information of value. The writer divides the family into two tribes. Piperomicæ, and Pipereæ, and describes their localities and uses. The descriptions would occupy four pages of this Magazine.

It is said that a Mr. Loseby has made a great improvement in chronometers, remedying an acceded defect, to wit: that if their compensation be adjusted for very high or very low temperatures, they will gain at middle temperatures. He remedies the difficulty, by taking advantage of two properties of mercury, fluidity and thermal expansion. His plan has been undergoing trials by the admiralty.

Guano, though it is nearly all removed from Ichaboe, has been recently found in large quantities elsewhere. On Hollam's Bird Island, there is a mass of good quality, estimated at 10,000 tons—latitude 26 deg. 38 S. On Ludovic Island, as much more—latitude 25 deg. 55 S. Both of these islands are on the African coast. Between the Cape of Good Hope, and Cape Voltas, there are five principal depots of guano.

1. Seal Island, False Bay, 10,000 tons.
2. Isles Julian, Saldanha Bay, and Isle Malaga contain 48,000 tons of good quality.
3. Between Cape Voltas and Benguela, the two of Hollam and Ludovic, already named.
4. Tom's Island, twice as large as that of Ichaboe; lat. 6 deg. 42 S.
5. Another, north of Latham Island, under the dominion of the Imaum of Muscat, has been taken possession of by the British Government with the Imaum's consent.

Other deposites are known to exist on the islands of Zanzibar.

Guano which is exposed to rain, so as to be bleached, loses its fertilizing qualities, and this may explain why some cargoes brought to this country have proved nearly worthless.

Capt. Franklin's expedition, when last heard from, was seen in latitude 72 deg. 45 S., longitude 58 deg., on the 19th of July, steering E. N. E., and not any ice to be seen. The prospects of a successful voyage were very great.

LITERARY.

We perceive with pleasure, that Maynard, a bookseller, in Earl's Court, Leicester Square, London, has published a catalogue of a splendid collection of English and foreign Mathematical and Philosophical tracts.

M. Duflot de Mofras, attaché to the French legation at Mexico, has published a survey of the Oregon Territory and California, made under the direction of the French Government. It is an interesting and valuable work, and has given much rise to speculation as to the fate of Mexico, and the progress of annexation as a principle of the United States policy.

A collection of the works of Scribe, the dramatist, has appeared in Paris. The success of this writer, and the wonderful facility of his mind, have made him an object of interest in the literary world.

The conversations of Mr. Lowell, an American poet, on some of the old poets, are well received abroad.

The London Atheneum, No. 933, contains an interesting notice of some late treaties on Mesmerism, and condemns the tricks of some of the most famous clairvoyants.

Miss Martineau's story has been overturned by one of her own witnesses.

We notice the death of an eminent French Philosopher, Roer Collard, and of a Spaniard of note, Signor Izytueta, known as the Basque bard.

Œrsted, the Danish savan, whose discoveries in Electro Magnetism are known all over the world, has been elevated to the rank of Baron.

An extensive publishing and printing establishment, for the purpose of pirating French copyrights, has been discovered in France, through the exertions of Bailleul, Inspector of Libraries and Printing Offices. In the warehouse at Angouleme, 18,000 volumes were found, nearly ready for market. The parties concerned have been arrested.

The Baron Duben, an eminent Swedish naturalist and pupil of Cuvier, has been suddenly cut off at the age of 39 years. He had travelled in this country.

Mad. Hoffmann, an eminent Polish writer, and long an exile from her own country, recently died in Paris.

M. Gjoedwad, the editor of a paper at Copenhagen, having recently predicted the downfall of the absolute Royalty of Russia, was recently prosecuted for his opinion, and condemned to pay a fine of about 1000 dollars. His library was seized for the purpose of obtaining the amount for the government. At the day of sale, the first book offered was the Maxims of Rochefaucauld, worth ninepence. A merchant bid 1500 dollars for it and the sale was stopped. This friend of the liberty of the press, is named Falkenbjerg, and his conduct has excited the warmest feelings of admiration throughout his country.

We notice further numerous replies to the celebrated work called the Vestiges of Creation, republished by Wiley and Putnam of this city. It is needless to say the replies continue to be of a conclusive and masterly character.

Dr. Mantell has brought out a new work on Geology, called the Medals of Creation.

In the review of a work called the Manual of Agricultural Analysis, contained in that old fashioned Conservative, Church and State Magazine, the Gentleman's, we find the following sentence, which smacks somewhat of the the theory recently broached by an avowed radicalism, and is, therefore, from its position, somewhat curious: "This little island of ours instead of being overburdened with population could be made, with a RIGHTEOUS DIVISION of the earth's gifts, to feed as many again."

Quite a disturbance has arisen in England among the churchmen, in consequence of a tract having been written by the Bishop of Chester, on Justification, and published by the Society for the Promotion of Christian Knowledge, as No. 619. It threatens very serious difficulty.

Eton College now has 761 boys on its election list. The number of assistant masters is sixteen, independently of a mathematical master and two assistants, and seven extra, and assistant extra masters.

The recent death of William Laidlaw, the friend and steward of Sir Walter Scott, has excited much attention in the literary world.

He was the son of a sheep farmer in Selkirkshire, and devoted himself to agriculture. While looking about for a farm suitable to his designs, he was invited to Abbotsford, to become the steward of Sir Walter Scott.

But his mind was of that order which induced his patron to employ him in many literary undertakings. He furnished articles for the Edinburgh Annual Register, and acted as his amanuensis, when the novelist was too weak to write himself. When Sir Walter's affairs took that disastrous turn, of which the world has been so minutely advised, Laidlaw was removed from his position. He became the agent of the Seaworth family, and afterwards of the Ross estate. He died at the house of his brother, in Ross county, in the month of May last. He was a man of considerable attainments, and his beautiful ballad of Lucy Flitting, printed in the Forest Minstrel of Hogg, the Ettrick Shepherd, has made his name quite famous.

We perceive that the death of J. Augustus Shea, a poet who recently died in this country, and was for a long time connected with the American periodical press, has been noticed abroad. We regret to state that this gifted man had a continual struggle with misfortune during his life, and that the tardy chaplet which adorns his tomb, is but another instance of the affecting injustice of the world, too often exhibited to men of genius and of letters.

Another obituary notice before us, records the death of the interesting Madame St. Elme, the authoress of the 'Memoires d'une Contemporarie.' She was the wife of one of Napoleon's officers, the Count St. Elme, whom she attended on horseback through several of his campaigns. In one of them she was actually wounded at the side of her husband. Her character was an extraordinary one, and the possession of great beauty and great bravery, was accompanied by genius, and true benevolence of character. She died at Hamburgh, a few weeks since. We trust her memoirs will be written by some competent pen.

The last number of the New Monthly, contains the first chapter of an amusing work, called the Travels and Opinions of Mr. Jolly Green. The same periodical praises the late work of Mr. Willis, Dashes at Life.

Mr. Mackinnon, M. P. for Lymington, is preparing a History of Civilization.

The poetical works of Alexander Wilson, the American ornithologist, have been published in Belfast, and give us a high idea of that interesting man's poetic ability.

The following valuable works are announced:

Visit to the Portuguese Possessions in South Western Africa, by Dr. Tams.

Sixteen years in the West Indies, by Col. Capadose.

The Young Baronet, a novel by the Scottish Boy.

The Age of Pitt and Fox, by Mr. Madden.

The History of Railways, by Robert Ritchie.

Lives of the Jacobites, by Mrs. Thomson.

A Book for a Rainy Day, by J. T. Smith, late keeper of the prints and drawings in the British Museum, and author of "Nollekens and his Times."

Perez and Philip the Second, of Spain, by Lady Duff Gordon.

We think the publications of the last and present month will be found to be of a high order, and we trust our publishers will be on the alert to give us early copies from their own presses.

The human mind was never more active than at present. The world is all astir, and every thing seems tending to the development of human intellect and the progress of social improvement.

FINE ARTS.

The London Art Union of the last month is very entertaining. We find in it an extract from the prospectus of the School of Art, to be established in Manchester, England. The design is—

1. To institute a class for the study of the antique and the living model.
2. To collect a reference library, comprising works of history, poetry, archaiology, optics, anatomy, chemistry applied to color, architecture, sculpture, painting, and engraving.

The Royal Irish Art Union has resolved to exhibit its prize pictures in all the chief towns of the Irish provinces.

A Mr. Rogers is astonishing the English public by the surprising beauty of his carving on wood.

A new toilet glass for the ladies is now much admired. It is one of the contributions of art for their comfort, and is styled the Qua qua versal glass, a term translatable very easily by one much in use among us, "Every which way." The mirror can be raised, lowered, turned to the right or left, and placed in any required angle.

Mr. and Mrs. S. C. Hall are about issuing a Pictorial Sketch of a Month in the Highlands, containing 300 engravings on wood.

A large number of beautiful engravings has recently appeared in London, from the hands of its most eminent engravers.

On looking over the periodicals for items of interest under the head of fine arts, we do do not see any thing of particular importance, and the continental news is extremely barren.

Thus ends our glance for the present number.

NOTICES OF NEW BOOKS.

The Farmer's Library, and Monthly Journal of Agriculture, for October. Edited by John S. Skinner. GREELEY & MCELRATH, Tribune Buildings, New York.

This valuable journal has reached its fourth number, which is now before us. Its contents are as follows, viz:

Thaer's Principles of Agriculture.

Memoir of Justus Liebig, the great German Agricultural Chemist.

Memoir on the Origin and Culture of the Cotton plant.

Central or Red Land District of Virginia, described by the Hon. Mr. Goggin, M. C.
An article on 'Soiling
The Construction of Farm Houses.
Mr. Hammond's Farm, Worcester, Massachusetts.
Agricultural Improvement, in a Letter from Gen. Dearborn.
Progress of Agricultural Improvement, in a Letter from Judge Ross, of Missouri.
Present State and Prospects of the English Wool Market.
New York State Agricultural Fair, held in September last, &c., &c.

With such a list of the most valuable information, this work must continue to claim the increasing patronage of the public, which we are happy to learn has been liberally extended to it, and which it richly merits, from the competent knowledge and long experience of its able editor.

The Vision, or Hell, Purgatory, and Paradise. By Dante Alighieri. Translated by the Rev. Francis Carey, A. M., with the Life of Dante, Chronological View of his Age, additional Notes, and Index. Illustrated with twelve Engravings, from designs by John Flaxman, R. A., from the last corrected London edition. New York: D. Appleton & Co., 200 Broadway. Philadelphia: George S. Appleton, 148 Chesnut street. 1845.

This is a splendid work, and will doubtless give great satisfaction to the public. It is always gratifying to see standard works like this celebrated poem, put forth in a style combining elegance and convenience. Although the size is duodecimo, the type is so beautiful, the paper so white, and the text so clear, that it can be read with great ease and comfort.

In the last part of the Preface, the translator says, "This is the third edition, and wherever an omission or an error in the translation has been pointed out to me, I have done my best to supply the one and to correct the other."

We have thus, the "Divana Comedia," of this greatest of Italian poets, from the most celebrated translator, in a highly satisfactory form; and as every man of literary taste must desire to possess such a treasure, we cannot doubt the publishers will be handsomely remunerated for the care they have taken, to make it in every way worthy of public patronage. It is needless to say that the engravings from the designs of Flaxman are greatly ornamental, and do credit even to his high reputation as an artist.

Essays by John Abercrombie, M. D., F. R. S. E., Author of "Inquiries concerning the Intellectual Powers, the Philosophy of the Moral Feelings," &c. &c. From the nineteenth Edinburgh edition. New York: Harper & Brothers, 82 Cliff st.

This is a short series of moral lessons, adapted and addressed to the industrious classes, ranged under the following names:—The Harmony of Christian Faith and Christian Character; Culture and Discipline of the Mind; Think of These Things; The Contest and the Armour; The Messiah as an Example.

If any thing were wanting to add to the value of a work from the pen of so celebrated a moralist as Dr. Abercrombie, surely, that this book has gone through thirteen editions in the enlightened city of Edinburgh, is enough. With such recommendations, we may anticipate for it a speedy and ready return to the enterprising publishers.

I promessi Sposi. The Betrothed, By Alessandro Mansoni. A new Translation, reprinted entire from the last London edition, in two volumes. New York: D. Appleton & Co., 200 Breadway. Philadelphia: George S. Appleton, 148 Chesnut street. 1845.

We have not much time to devote to reading works of fiction, but this book is of no ordinary character, and we have read it not only with great pleasure, but with much addition to our knowledge of life in Italy. It can hardly be said to be a work of fiction, it goes so fully into the detail of events which transpired in the Milanese in the seventeenth century, that its character is in the main historical. It is true that there is interwoven a tale of unalterable love and attachment between parties in humble life, which creates much interest; and the author says in his introduction, "that having come to the knowledge of facts worthy of remembrance, even though they happened to persons of low condition and ordinary rank, I would address myself to the task of leaving their memory to posterity by giving, with all accuracy, the account, or rather the relation of them; wherein will be seen grievous tragedies of horror and scenes of great wickedness, interspersed with virtuous enterprises and angelic goodness, opposed unto Satanic operations." This he has done in language, and in a manner to enchain the attention of the reader.

Allendorff's New Method of learning to read, write, and speak the German Language, to which is added a Systematic Outline of the different Parts of Speech, their Inflection and Use, with full Paradigms, and a complete table of the Irregular Verbs. By G. J. Adler, A. B. New York: D. Appleton & Co., 200 Broadway. Philadelphia: George S. Appleton, 148 Chesnut street. 1845.

This Grammar of the German language is said to have a very extensive circulation in England, and to receive a decided preference over all others. The peculiar method adopted is best described in the editor's own words, and is as follows:

"Instead of presupposing a familiarity with English grammar in the pupil, and then presenting a synthetic view of the principles of the language, as is commonly done, he begins apparently without any system, with the simplest phrases, from which he deduces the rules, until gradually and imperceptibly he makes the pupil master of the etymology and syntax of every part of speech. The rules are, as it were, concealed amid the multitude of exercises which are added to each lesson, and which serve to fortify the learner in the principles he has already acquired."

This appears to be a good plan, and as the importance of a knowledge in the German language is daily gaining ground, we think this grammar may be made very useful in its acquisition.

The Elements of Morality, including Polity. By William Whewell, D. D, author of the History and the Philosophy of the Inductive Sciences. In two volumes. New York: Harper & Brothers, 1845.

The author of this book draws a nice distinction between moral philosophy and its elements; which latter, it will be perceived, is the title under which he writes, and which he explains in his preface to mean the philosophy of morality; and he defines this distinction as analagous to the distinction between geometry and the philosophy of geometry. "Geometry," he says, "is a series of positive and definite proportions, deduced from one another;" while what he calls the philosophy of geometry includes inquiries such as these:—Whence is the cogency of geometrical proof? What is the evidence of the axioms and definitions? What are the faculties by which we become aware of their truth?—and the like.

With these views, he treats of, 1st. Reason; 2d. The Springs of Human Actions, under five heads—the Appetites, the Affections, the Mental Desires, the Moral Sentiment; 3d. Moral Rules exist necessarily; 4th. Right Adjective or Right Substantive, etc. etc.

In this way he proceeds, examining into every division of the subject of Moral Action, involving rights of persons, rights of control, &c.

We observe, with pleasure, that he states his having made use of Chancellor Kent's Commentaries on American Law, and the late Judge Story's Commentaries on Equity.

An Encyclopedia of Domestic Economy, comprising such subjects as are most immediately connected with housekeeping; as the construction of domestic edifices, with the modes of warming, ventilating, and lighting them; a description of the various articles of furniture; a general account of the animal and vegetable substances used as food, and the methods of preparing them by cooking; making bread; materials employed in dress and the toilet; business of the laundry; description of the various wheel carriages; preservation of health; domestic medicines, &c., &c. By Thomas Webster, F. R. S, &c., &c., assisted by the late Mrs. Sparks, author of "Domestic Duties." From the last London edition, with Notes and Improvements, by D. Meredith Reese, A. M., M D. Illustrated with one thousand Engravings. New York: Harper & Brothers, 82 Cliff street. 1845.

We should think the title of this book, and the name of its author and that of the American editor, would promise a ready sale for it: but an inspection of its valuable contents must insure its wide dissemination. We took occasion to notice some of the numbers, as they come out—twelve of them constituting the present book. There is scarcely a subject upon which housekeepers wish information, which is not here fully and ably treated by men of science and a lady of experience and judgement.

As a book of reference it will prove a great treasure, particularly to young and inexperienced parties, and therefore it should occupy a conspicuous place in every family library. Science is now shedding its light upon almost every subject, and it is nowhere more needed than in domestic economy, on the proper exercise of which depend in a great measure the comforts of life, but in which it must be admitted there has always been too much quackery.

An Interesting American Work. My Uncle Hobson and I, or Slashes at Life with a Free Broad-Axe. By Paschal Jones. New York: D. Appleton & Co., 200 Broadway. Philadelphia: George S. Appleton, 148 Chesnut street. 1845.

Into this book we have only had time to cast a hurried glance, and from what we have seen it appears worthily to sustain its title of "Slashes at Life," giving touches at peddling, at nature and philosophy, extra sensibility, serious matters, camp meetings, and various other things. The style is familiar, and as the scenes it touches and the locations are all domestic, while "the Slashes" are some of them at parties and books well known, it will not be without its share of interest to many readers.

The American Shepherd, being a History of the Sheep, with their breed, management and diseases, illustrated with portraits of their different breeds, sheep barns, sheds, &c., with an Appendix, embracing upwards of twenty letters from eminent wool-growers and sheep-fatteners of different States, detailing their respective modes of management. By L. A. Morrell. New York: Harper & Brothers. 1845.

While so much public attention is given at the present time to agricultural pursuits, a good treatise on sheep will doubtless prove very acceptable to those concerned in that department of rural economy; and this work promises to supply them with much knowledge that will doubtless prove highly advantageous. The wood cuts of the different species are spirited and characteristic.

Wiley & Putnam's Library of Choice Reading.

No. 21 is Professor Wilson's "Genius and Character of Burns." Professor W. is well known as the author of the "Lights and Shadows of Scottish Life," "The Recollections of Christopher North," &c.

Who, but must wish to know something of the character and genius of Burns, the Poet of Nature, sprung, as is justly said, "from the bosom of the people;" and here he will find a treatise upon them, by a master's hand.

No. 22 and 23 contain the "Essays of Elia," by the sententious, the witty, the accomplished Charles Lamb. But every reader—one that is really so—knows Charles Lamb, though all have not read "the Essays of Elia." To such we say, do not delay to do so, for his originality of thought, his power of language, and bewitching style, will not only amply repay you, but you will wonder how it can have happened you have so long delayed the great pleasure with which you will rise from the real literary treat you will find in the "Essays of Elia."

No. 24 is "Bubbles from the Brunnen," by Sir Francis Head. We have already given our favourable opinion of this number, but have great pleasure in a second time recommending these "Bubbles" as the ebullitions of a kind heart, describing what he saw and felt while at the Mineral Springs in Nassau, as a valetudinarian.

No. 25 is "Table Talk," by William Hazlitt, Part 1st of 2d Series. The contents are: On the Feeling of Immortality in Youth; On the Want of Money; On Sitting for One's Picture; Whether Genius is conscious of its Powers; On Londoners and Country People; On Living to One's Self; On Genius and Common Sense; Hot and Cold; On Thoughts and Actions; Portrait by Vandyke; On Dreams; a Dialogue on Envy, &c. &c. The subjects are of course familiarly treated, and will be read with pleasure and improvement.

No. 26 contains "Selections on Religious and Moral Subjects," from Taylor, Latimer, Hall, Milton, Barrow, South, Brown, Fuller, and Bacon, names too well known to need encomium. The extracts are made by Basil Montague, Esq. They have gone through five London editions, and comprise the views of these great men upon almost every moral and religious subject.

No. 27 is entitled, "Twins and Heart," by Martin Farquhar Tupper, author of the "Crock of Gold," "Proverbial Philosophy," etc. etc. Want of time prevents our reading this, but which is from the author of the "Crock of Gold," and we cannot, therefore, doubt its being full of interest.

Wiley and Putnam's Library of American Books.

No. 6: "Wanderings of a Pilgrim under the Shadow of Mont Blanc." By George B. Cheever, D. D. This is, as its title indicates, a description of scenes on and near Mont Blanc, accompanied with the reflections and feelings of the writer, who turns all the magnificent scenery of the place into subjects of moral reflection.

An Abridgement of Murray's English Grammar. By Samuel Putnam. New York: Caleb Bartlett.

This is a very clever abridgement of Murray's popular grammar, which was so long the standard in most of our schools, but has been in a manner superseded by sundry works of American grammarians. Any one, however, who understands Murray's system perfectly, will "write and speak the English language with propriety."